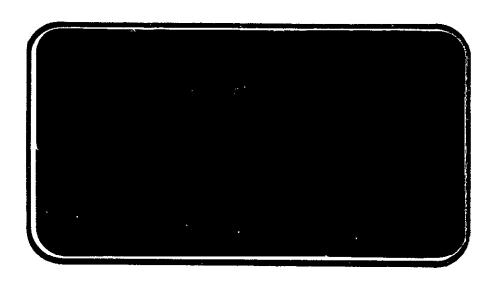


Lyndon B Johnson Space Center Houston, Texas 77058 CR-171 693



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CL 22B Unclas G3/16 36179

SPACE SHUTTLE AEROTHERMONFORMIC DATA REPORT



Data Management services



DMS-DFR-2095

PHASE C

AEROTHERMODYNAMIC

DATA BASE QUARTERLY

DATA FILE CONTENTS REPORT

APRIL/JUNE.1983

Prepared under NASA Contract Number NAS9-16283

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Data Management Services
Chrysler Huntsville Electronics Division
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New Orleans, Louisiana 70189

for

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TABLE OF CONTENTS

Section			Page
1.	Introduction	a ^t	v ·
2.	Baseline Configuration Designations		vii
3.	Summary Data Reports		vii
4.	Data File Report Digest		vii
5.	Wind Tunnel Test/DATAMAN Data Processing Summary		xii
6.	Space Shuttle Facility Wind Tunnel Summary		xiii
	Distribution		399·

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LIST OF TABLES

Table No.	<u>Title</u>	Page
1-1	Summary of Data Base Records	vi
3-1	Summary Data Reports List	xiv
4-1	Data File Report Digest	1
5-1	Wind Tunnel Test/DMS Data Processing Summary	99
6-1	Space Shuttle Facility Wind Tunnel Summary	359

LIST OF FIGURES

Figure No.	<u>Title</u>	Page
2-1	SSV Orbiter 5 Configuration Baseline	viii
2-2	Configuration 5 Launch Vehicle	ix _
2-3	Configuration 5 External Tank and Solid Rocket Booster	x
2-4	Orbiter/747 Flight Test Configuration	хi

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1. INTRODUCTION

Space shuttle aerothermodynamic data, collected from a continuing series of wind tunnel tests, are permanently stored with the Data Management Services (DMS) system. Information pertaining to current baseline configuration definition is also stored. This report lists documentation of DMS processed data arranged sequentially and by space shuttle configuration.

Purpose of this report is to provide an up-to-date record of all applicable aerothermodynamic data collected, processed, or summarized during the space shuttle program. Tables are designed to provide survey information to the various space shuttle managerial and technical levels. Table 1-1 summarizes the contents and purposes of report sections.

<u> Item</u>	Contents	Purpose
Baseline configurations .	Space shuttle configurations designated as reference or baseline	Current baseline configuration reference
Summary data reports	List of DMS reports presenting results of data analysis or refinements	Index of space shuttle aerothermo design data reports
Data file report digest	Compilation of space shuttle tests into operational status and basic configuration groups	Information arranged by vehicle on tests DMS processed or has in process
Wind tunnel test/DMS data processing summary	Table of space shuttle test data for which results have been incorporated into DMS data base	Reference of test data in DMS data base sequentially by data report number
Space shuttle facility wind tunnel summary	Summary of all space shuttle tests by facility	Information arranged by facility on tests DMS processed or has in process

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2. BASELINE CONFIGURATION DESIGNATIONS

Configurations designated as baseline or reference configurations are in this report. Figure 2-1 shows the orbiter, figure 2-2 the launch vehicle, figure 2-3 the ET and SRB, and figure 2-4 the carrier.

3. SUMMARY DATA REPORTS

Summary data reports differentiate from data reports in that data reports present basic wind tunnel data as collected and summary reports contain data germane to a particular design application of the basic aerothermo test data. Summary reports range from basic data reports of edited or refined data to reports presenting gleanings from basic data reports.

The list of summary reports (table 3-1) contains DMS-generated documents.

4. DATA FILE REPORT DIGEST

Data file digest (table 4-1) compiles all information in the DATAMAN system into three categories:

- 1) Recently published reports current three-month period.
- 2) Tests in process
- Published reports

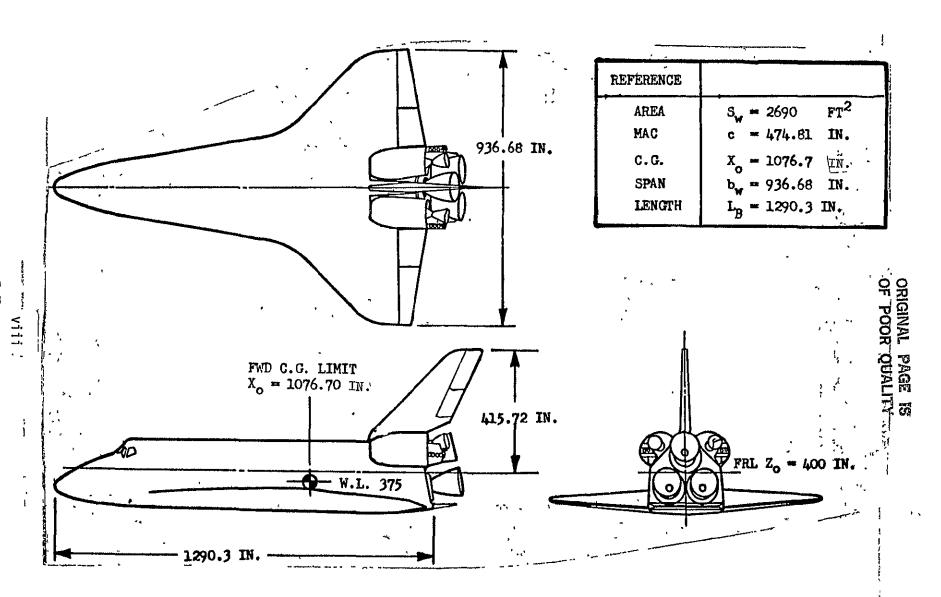
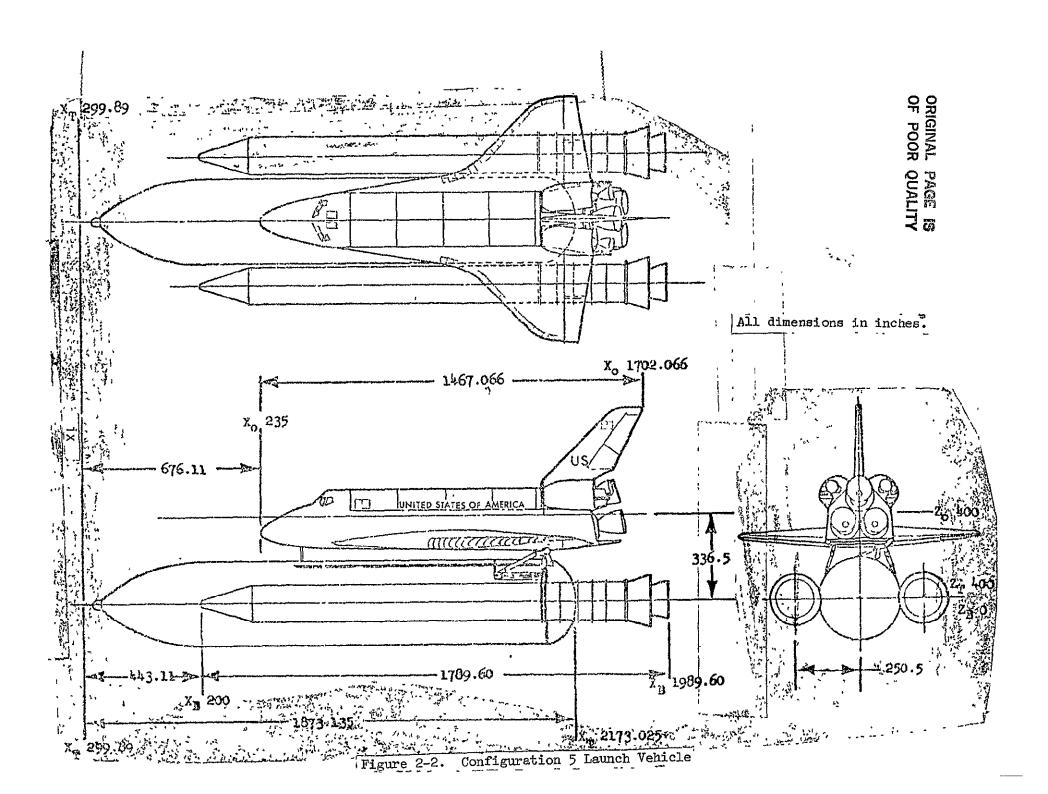


Figure 2-1. SSV Orbiter 5 Configuration Baseline



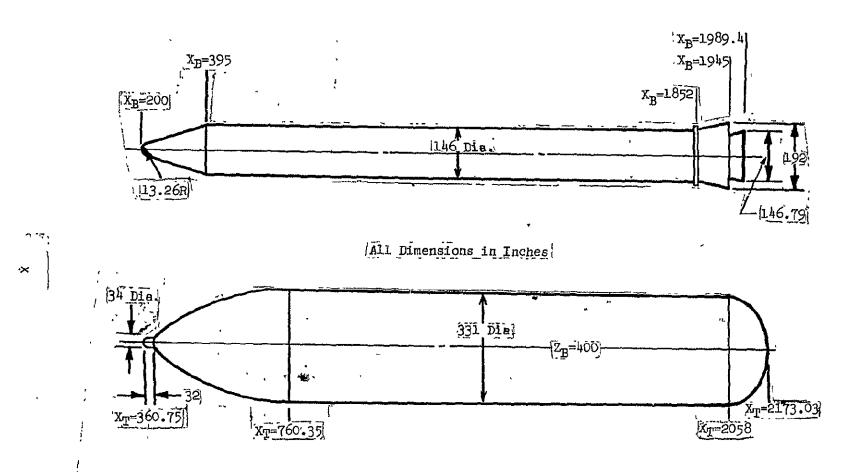


Figure 2-3. Configuration 5 External Tank and Solid Rocket Booster

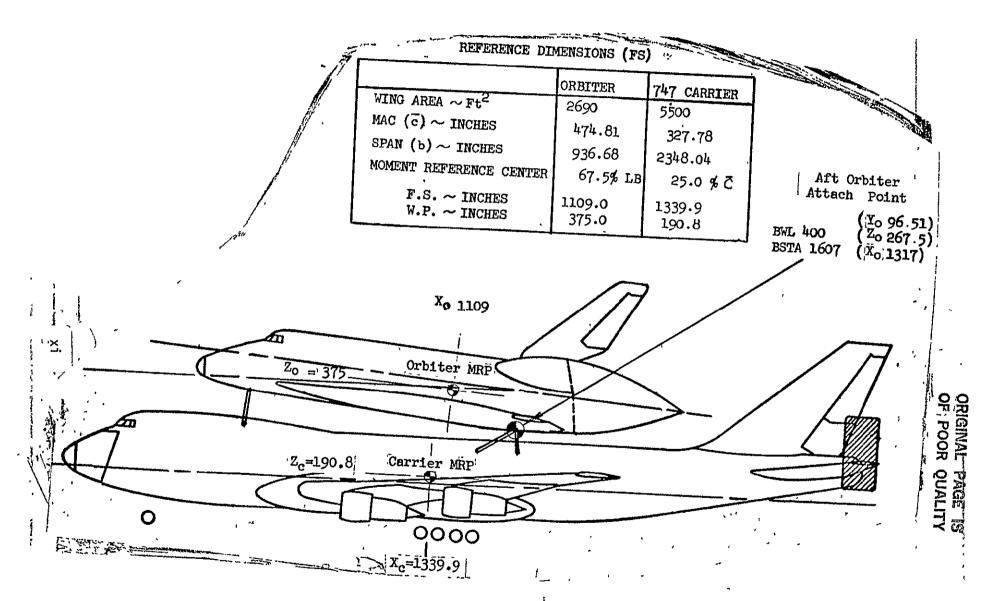


Figure 2-4. Orbiter/747 Flight Test Configuration

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Each section is subdivided into five configuration categories:

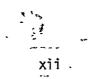
- 1) Booster data
- 2) Orbiter data
- 3) Booster/orbiter data
- 4) External tank data
- 5) Carrier data

Information on each test is as follows:

- 1) DMS report number
- 2) NASA series number
- 3) NASA CR number
- 4) NASA TM X- number
- 5) Two-character test code
- 6) Configuration (specific)
- 7) Test number
 - 5. WIND TUNNEL TEST/DATAMAN DATA PROCESSING SUMMARY

Space shuttle wind tunnel test data incorporated into the DATAMAN data base are listed by DMS report number in the processing summary (table 5-1). This summary collects test particulars so the reader can evaluate or categorize data. It contains the following information:

- 1) Test facility
- 2) Test identification
- 3) Configurations tested
- 4) Purpose of test
- 5) Type of test
- 6) Model scale



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- 7) Test Mach number range
- 8) Testing agency
- 9) Cognizant test/DMS personnel
- 10) Basic publication numbers

6. SPACE SHUTTLE FACILITY WIND TUNNEL SUMMARY

Numerous wind tunnel facilities test space shuttle configurations. Table 6-1 collects information on tests completed or in process, grouped by facility.

It contains the following information:

- 1) Two-character test code
- 2) Facility
- 3) Tunnel
- 4) Test number
- 5) · NASA series number
- 6) DATAMAN report number

TABLE 3-1. Summary Data Reports List
(No Data Available at Present)

xiv

2

INDEX OF RECENT PUBLICATIONS APRIL /JUNE

DMS DMS-DR-	NASA SERIES NUMBER	CR T	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2336	LA145	167,375		LARC 0098-SCALE CAST ALUMINUM	LARC - -UNITARY PLAN WIND TUNNEL - 1345 1390	7H
2445 V-01	OA 146	167,652	ı	SSV 14DA/B/C/R DRBITER	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 318-1 .	3 G
2445 V-02	OA 146	167,653		SSV 14DA/B/C/R ORBITER	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND TO UNNEL (UNITARY) - 318-1	3 G

3

INDEX OF RECENT PUBLICATIONS APRIL /JUNE

INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2357	IH68	167,655	•	INTEGRATED VEHICLE ORBITER PLUS TANK	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 222	2D -
2481	1A602	167,377		OTS (MODEL 74) OTS + LBM	MSFC - 14-INCH TRISONIC WIND TUNNEL 665	6B -

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ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2188	LA39				LARC - UNITARY PLAN WIND TUNNEL - 1075	QY
2213	LA53 LA54				LARC FREON TUNNEL - 220-237 20-INCH HYPERSONIC TUNNEL (MACH 6) - 456	Но
2220	LA52		•		LARC - 20-INCH HYPERSONIC TUNNEL (MACH 6) - 458	HN
2228	LA46A/B				LARC - UNITARY PLAN WIND TUNNEL - 1092/1117 1117	HG 🔘
2237	OA 155			VEHICLE 5 ORBITER	LARC - V/STOL TRANSITION RESEARCH WIND TU NNEL - 114	OF POOR
2256	LA68				LARC - 22-INCH HELIUM TUNNEL - 439	US QUALITY
2260	LA60B LA60C		•		LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 715 8-FOOT TRANSONIC PRESSURE TUNNEL - 776	кв ТҮ
2287	0 S13				ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 166-1	NN

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5

INDEX OF WORK IN PROCESS

ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIF	CTER
2291	LA79		,	,	NSWC ~ TUNNEL 8A ~ 1275	JM	
2292	LA36B				LARC - LOW-TURBULENCE PRESSURE TUNNEL - 214	JS	
2339	0\$32				ARC - 2-FOOT BY 2-FOOT TRANSONIC WIND TU NNEL - 167-1	20	
2362	LA92				LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 764	K 1	
2379	LA 106				LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 776	, KC	ORIGINAL OF POOR
2383	LA93				LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 130	К2	
2388	OH84A		•		AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-R4A	4E	PAGE IS
2388	OH84A			MODEL 83-0 (04 SCALE) ; MODEL 60- 0 (.0175 SCALE)	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-R4A	4E	~ va
2394	LA109				LTV - HIGH SPEED WIND TUNNEL - 611	FR	
2411	LA116				LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 804	KM	

ì

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2425	LA117				LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 813	ΚQ
2427	0H103B			MODEL 60-0; LINES VL70-000140C	AEDC - HYPERSONIC WIND TUNNEL (B) V41B-V2C	4M
2441	LA 127		,		LARC - LOW-TURBULENCE PRESSURE TUNNEL 255	κυ -
2442	LA128				LTV - HIGH SPEED WIND TUNNEL 646	кү 9 %
2446	LA 122				LARC - UNITARY PLAN WIND TUNNEL 1270	OF POOR
2447	0 \$52				ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 436-2	QUALITY
2458	0\$36				ARC - 11-FOOT TRANSDNIC WIND TUNNEL (UNI TARY) 369-1	3L ₹8
2459	0\$37				ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 369-1	эм -
2463	0541 0542 0545				ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 380-1 381-1	30

ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2465	OS55			81-0 HRSI TILE PANEL	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 464	LΑ
2466 V-01	0A257	167,663		B75,C16,E64,F16,M52,N108,N110,N111,R20,V27,W131	LARC - 20-INCH HYPERSONIC TUNNEL (MACH 6) - 6559	7E
2466 V-02	OA257	167,664		B75,C16,E64,F16,M52,N108,N110,N111,R20,V27,W131	LARC - 20-INCH HYPERSONIC TUNNEL (MACH 6) - 6559	7E
2470	OS31A	167,658		LRSI (THIN TILE)	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 145-1	ORIGINAL OF POOR
2484	LA 144			OV102~SSME ON	LTV - HIGH SPEED WIND TUNNEL - 742	
2491 V-01	OA258	167,659		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14V	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-HD	PAGE IS QUALITY
2491 V-02	OA258	167,660		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14V	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-HO	Т1
2491 V-03	0A258	167,661		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14V	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-HO	T1
2491 V-04	OA258	167,662		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R20V27VT10VT11VT12VT13VT14V	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-HO	т1

ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2493 V-01	GA259	167,665		B75,C16,E64,F16,M52,N108,N109,N110,N111,R20,V27,W131	AEDC - HYPERSONIC WIND TUNNEL (B) - V42B-145 V43B-14	тз
2493 V-02	OA259	167,666		B75,C16,E64,F16,M52,N108,N109,N110,N111,R20,V27,W131	AEDC - HYPERSONIC WIND TUNNEL (B) - V42B-145 V43B-14	73
2497	MA34		•	ORBITER FOREBODY	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 594	T4
2498	0A255 0A256	167,656		102 (PRELIMINARY)	LARC - UNITARY PLAN WIND TUNNEL - 1311 16-FOOT TRANSONIC TUNNEL - 1358	7B
. 2507	МАЗЗА/В			,	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 510-1 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	AU

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INDEX OF WORK IN PROCESS

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DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2239	LA38B		•		LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 676	QX
2393	IH51A			OT FLAT PLATE	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 228-1	20
2439	IA182				AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) , - 517	4P
2460	FA27				MSFC - 14-INCH TRISONIC WIND TUNNEL - 655	1Y
2461	IH51D				ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 244	зи
2476	IA190A IA190B				ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 411-1,2,3 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY)	3U
2480	IH104			ORBITER+TANK	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 250	3M
2511	1A300				ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 561-1	AZ

BOOSTER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	2	ATASET -CHARACTE ESCRIPTOR	
2012	SA1F	120,090		SRB(PRR)	MSFC - 14-INCH TRISONIC WIND TUNNEL 554	-	79	
2025	SA3F	128,767		142-INCH DIAMETER SRB WITH AND WIT HOUT STRAKES	MSFC - 14-INCH TRISONIC WIND TUNNEL 565	-	80	
2051	SASF	128,774		BOOSTER MSFC MODEL NO 449	MSFC - 14-INCH TRISONIC WIND TUNNEL 572		86	
2087	SATOF	134,116	•	SRB WITH VARIED SHROUD LENGTHS AND FLARE ANGLES	MSFC - 14-INCH TRISONIC WIND TUNNEL 578	-	91	
2088	SA2FA SA2FB	134,105		142~INCH SOLID ROCKET BOOSTER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 655 8-FOOT TRANSONIC PRESSURE TUNNEL 662	<u>-</u>	PS	ORIGINAL OF POOR
2111	SA26F	134,435		MDDEL 449/CONF.NBRE1, NBRE1A, NBRE 1B, NBRE1S1ELT	MSFC - 14-INCH TRISONIC WIND TUNNEL 590/595	-	95	PAGE IS
2142	FA4	134,402		TITAN IIÎ C SRM	MSFC ~ 14-INCH TRISONIC WIND TUNNEL 587	-	97	7 73
2150	SA25F	141,511		SRB	LARC - UNITARY PLAN WIND TUNNEL 1087		Н9	
2161	SAGF	134,422		SRB-BODY ALONE	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL 035	-	GE	

11

INDEX OF PUBLISHED DATA

BOOSTER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2207	SA29F	147,608		MODEL 467, SRB NOSE CONE AND FORWARD CYLINDRICAL BODY	MSFC - HIGH REYNOLDS NUMBER WIND TUNNEL 033	1E -	
2216	SH12F	141,802		SRB	LARC - UNITARY PLAN WIND TUNNEL 1115	HA ~	
2223	SABF	141,549		ORB W/ ATTACH RING,AFT RING,W/AND W/O PROTUBERANCES, NOSE CAP	MSFC - 14-INCH TRISONIC WIND TUNNEL 604	- ^{1H} -	ORIG
2244	SA28F	151,082		146-INCH WITH AND WITHOUT PROTUBER ANCES	MSFC - 14-INCH TRISONIC WIND TUNNEL 603		ORIGINAL
2277	SA13F	144,579		MODEL 461, 142-INCH DIA WITHOUT P ROTUBFRANCES	MSFC - HIGH REYNOLDS NUMBER WIND TUNNEL 034	QUALITY	Page
2310 V-01	SA14FB	151,083		RIGHT-HAND SRB REENTRY CONFIG.	MSFC - 14-INCH TRISONIC WIND TUNNEL 640	- IP ≺ Č	Ž
2310 V-02	SA14FB	151,084		RIGHT-HAND SRB REENTRY CONFIG	MSFC - 14-INCH TRISONIC WIND TUNNEL 640	-	
2325	SA14FA	147,645		CONF. 139	MSFC - 14-INCH TRISONIC WIND TUNNEL 620	10 -	
2331 V-01	SA11F	160,838		SRB-WITH HEAT SHIELD(SOLID)	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY WIND TUNNEL 074-1 11-FOOT TRANSONIC WIND TUNNEL (UNITARY)	**	

BOOSTER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION .	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2331 V-02	SA11F	160,839		SRB-WITH HEAT SHIELD(SOLID)	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL - 074-1 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) -	NX
2334	SA16F	147,648		REENTRY CONFIG. WITH ALL MAJOR PRO TUBERANCES	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-4T) E3A	VP
2345	SA21F		78195`	146-INCH SRB/TRUNCATED NOSE (MODEL 486)	MSFC - 14-INCH TRISONIC WIND TUNNEL - 645	1R
2369	SA31F	167,345		SRB REENTRY CONFIG	MSFC - HIGH REYNOLDS NUMBER WIND TUNNEL - 039	17

DMS / DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2001	MA5	128,750		NR ATP ORBITER	LARC - UNITARY PLAN WIND TUNNEL - 1002	ΟQ	
2002	LA1	128,752	•	NR PRR ORBITER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 626	OU	
2003	MA2	128,754		NR ATP ORBITER	LARC - 22-INCH HELIUM TUNNEL - 409	os	
2004	MA 1	120,082		MSC 040A ORBITER	LTV - 15-FDDT BY 20-FOOT SUBSONIC WIND T UNNEL - S-081	DD	ORIGINAL OF POOR
2005	OAT	120,070		NR ATP BASELINE ORBITER	MSFC - 14-INCH TRISONIC WIND TUNNEL - 555	76	
2007	0A4	128,760		NR SSV ORBITER	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 147	BI	PAGE IS QUALITY
2008	МД4	128,751		NR ATP ORBITER	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 89	ОТ	
2008 R-01	МА4	128,751	*	NR ATP ORBITER	LARC - CONTINUDUS-FLOW HYPERSONIC TUNNEL - 89	01	
2009	CAG	128,761		SHUTTLE ORBITER DA3	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL - 650	вн	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASE 2-CHAR Descri	RACTER
2014	OA7	128,753		NR PRR-SSV ORBITER	LARC - Unitary plan wind tunnel 1007	_ O\	′
2016	OA2	120,092		NR ATP ORBITER	NRLAD - LOW SPEED WIND TUNNEL 689	- DF	:
2017	OA5	123,851		NR ATP ORBITER	NRLAD - LOW SPEED WIND TUNNEL 690	- -	
2019	OA6	128,756	•	ATP AND PRR ORBITER	NRLAD - LOW SPEED WIND TUNNEL 694	D3	Ī
2020	0A9	128,757		PRR ORBITER	NRLAD - LOW SPEED WIND TUNNEL 696	D.	S ORIG
2021 V-01	0A45	128,758		-89A ORBITER	NRLAD - LOW SPEED WIND TUNNEL 699	DI -	OR P
2021 V-02	OA45	128,758		-89A ORBITER	NRLAD - LOW SPEED WIND TUNNEL 699	Dŧ	ନ ଜିଲ
2022	0A 10	128,759	,	RI -89B ORBITER	NRLAD - LOW SPEED WIND TUNNEL 698	- -	< 7 m
2023	LA2	128,763		LO-100 ORBITER	LARC - 22-INCH HELIUM TUNNEL 411	- "	
2029	GA47	128,765		2A ORBITER	MSFC - 14-INCH TRISONIC WIND TUNNEL 568	- 84	1

15

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASE 2-CHAR DESCRI	ACTER
2030	OA 14	128,768		-89B ROCKWELL INTERNATIONAL SPACE SHUTTLE ORBITER	NRLAD - LOW SPEED WIND TUNNEL 700	DM -	
2031	LA3	128,769		LO-100 ORBITER	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 85	0Z -	
2033	LA4	128,772		LO-100 ORBITER	LARC - UNITARY PLAN WIND TUNNEL 995 1014	P1 -	
2034	LA22	128,764		DOUBLE DELTA WING ORBITER	LARC - 22-INCH HELIUM TUNNEL 405	ON ~	ORIGINAL OF POOR
2035	OH2A OH2B	134,077		THERMAL PROTECTION SYSTEM	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 158	BU -	
2036	LA5	128,775		LARC LO-100 ORBITER	LARC - 22-INCH HELIUM TUNNEL 413	P2	PAGE IS QUALITY
2037	OA84	134,405		140A/B ORBITER	LTV - HIGH SPEED WIND TUNNEL 488	FO	≺ ଊ୕
2038	OA16	128,793	•	NR ORBITER	NRLAD - LOW SPEED WIND TUNNEL 701	DN -	
2040	LA6	128,773		NAR 089-B-139 ORBITER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 643	P4 -	
2041	LA7A	128,781		LARC LO-100 ORBITER (SHIPS)	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 644	P5	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2042	1A52	134,087		ORBITER ALONE	MSFC - 14-INCH TRISONIC WIND TUNNEL - 584	98	
2043	LA 16	128,770		RSI TILES,ORBITER	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL - 624	PB .	-
2044	OA 11A	128,786		SHUTTLE ORBITER 2A	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 157	BS	
2045	OA 18	128,779	•	ROCKWELL SSV ORBITER	NRLAD - LOW SPEED WIND TUNNEL - 704 ,	00	
2046	LA 17	128,776		LARC LO-100 ORBITER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 648	PC PO	ORIGINAL
2047	LA31	134,086		O4OA SPACE SHUTTLE CONFIGURATION	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 98		
2049	0Н4О	128,771		NR 2A ORBJIER	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL - 3619/3670	ox E	PAGE IS
2050	OA43	128,790		ROCKWELL SSV 2A DRBITER	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL - 706	вт	
2052	LA10	128,791		LO-100 ORB(SHIPS) (BW2VFB)	LARC - UNITARY PLAN WIND TUNNEL - 1015	P8	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASE 2-CHAR Descri	ACTER
2053 V-01	0A21B	128,792		ORBITER 3	NRLAD - LOW SPEED WIND TUNNEL 705	DP -	
2053 V-02	0A21B	128,792	•	ORBITER 3	NRLAD - LOW SPEED WIND TUNNEL 705	DP	
2054	ŁA8A LA8B	128,796		NR ORBITER	LARC - UNITARY PLAN WIND TUNNEL 1023/1034	P6 -	
2055 V-01	0A48 -	128,780		ORBITER 139	MSFC - 14-INCH TRISONIC WIND TUNNEL 574	87	유유
2055 V-01	OA48	128,780		ORBITER 1398	MSFC - 14-INCH TRISONIC WIND TUNNEL 574	87 - វ៉ា	
2055 V-02	DA48	128,780		DRBITER 139	MSFC - 14-INCH TRISONIC WIND TUNNEL 574	-	PAGE IS
2055 V-02	0A48	128.780		ORBITER 139B	MSFC - 14-INCH TRISONIC WIND TUNNEL 574	- 87	₹ %
2055 V-03	0A48	128,780	•	ORBITER 139	MSFC - 14-INCH TRISONIC WIND TUNNEL 574	. 87 	
2055 V-03	0A48	128,780		ORBITER 1398	MSFC - 14-INCH TRISONIC WIND TUNNEL 574	87 -	
2056	LA9	128,782		NAR 089B-MOD NOSE	LARC - LOW-TURBULENCE PRESSURE TUNNEL 130/135	P7	

ORIGINAL PAGE IS OF POOR QUALITY

INDEX OF PUBLISHED DATA ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER		DATASET 2-CHARACTER DESCRIPTOR
2056	LA9	128,782		NAR 089B-MOD NOSE + OMS	LARC - LOW-TURBULENCE PRESSURE TUNNEL 130/135	-	P7
2057	OA44	134,411		ORBITER, MODIFIED 2A,3	LARC - UNITARY PLAN WIND TUNNEL 1035		PN
2058	OA 17	134,079		ORBITER NAR VL70-000134B CONFIG	LARC - LOW-TURBULENCE PRESSURE TUNNEL 138	-	PР
2059	OA 11B	128,798		ORBITER 2A	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 160	-	вх
2060	OA58	134,091	•	ORBITER 3,A	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 163	-	BA
2061	0A68	128,789	•	VL70-000139B (MODEL NO 42-0)	NRLAD - 7-FOOT TRISONIC WIND TUNNEL 276	-	DR
2061	0468	128,789		*VL70-000147B (MODEL NO 49-0)	NRLAD - 7-FOOT TRISONIC WIND TUNNEL 276	-	DR ,
2066	LA11	128,783		SPACE SHUTTLE ORBITER 0898-139	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 96	-	PD
2067	052	128,777		O 025 SCALE MODEL OF SPACE SHUTTLE ORBITER (24-0) FIN/RUDDER	LARC - 26-INCH TRANSONIC BLOWDOWN TUNNEL 544	-	PZ
2068	0A71A	128,797		-89B(2A) ORBITER	NRLAD - LOW SPEED WIND TUNNEL 708	-	DS

19

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIP	CTER
2069	МА7	134,074		PRR ORBITER	LARC - UNITARY PLAN WIND TUNNEL 1031	PM -	
2071	0A23	128,799	٠	MODEL 49-O	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 168	B6 -	
2071	OA23	128,799		MODEL 32-0	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 168	B6 -	
2073	0A7O	134,070		MODEL 42-0 OF THE VL70-000139B SSV ORBITER CONFIGURATION 3	LARC - UNITARY PLAN WIND TUNNEL 1043	- P V	ORIGINAL OF POOR
2074	OA57A	134.414		-89B SPACE SHUTTLE ORBITER FERRY CONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 709	- TO	NAL OOR
2075	OH41	128,784		MODEL SS-H-00326-1	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 3778/ 3855	P3 -	PAGE IS QUALITY
2076	OH4 1A	128,785		\$\$~H-00326-4	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 4060/ 4079	P9 -	
2076	OH4 1A	128,785		SS-H-00326B-5,-6,-7	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 4060/ 4079	P9 -	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACT DESCRIPTO	
2077 V-01	IA29 OA63	134,095			ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL 630	EB -	
2079	LA 15	134,083		O89B-139B(MODIFIED NOSE)	LARC - 20-INCH HYPERSONIC TUNNEL (MACH 6) - 441	PH -	
2080 V-01	OA57B	134,416		-89B SPACE SHUTTLE ORBITER FERRY C ONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 713	DV -	
2080 V-02	OA57B	134,417	•	-89B SPACE SHUTTLE ORBITER FERRY C ONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 713	υV -	유요
208 f V-01	DA69	141,580		-140 A/B SPACE SHUTTLE ORBITER	NRLAD " LOW SPEED WIND TUNNEL 711	DQ -	ORIGINAL OF POOR
2081 V-02	0A69	141,581		-140 A/B SPACE SHUTTLE ORBITER	NRLAD - Low speed wind tunnel 711	DQ -	PAGE IS
2082	0A73	128,800		CONFIGURATION 3A ORBITER	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 167	B5 -	T W
2083	OA2OA	134,081		SSV 140A/B DRBITER	LARC - Unitary plan wind tunnel 1057	Q2 -	
2085	0H10 IH2	167,344		`	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL 171	- 89	•
2086	0A71C	134,078		-89B ORBITER	NRLAD - LOW SPEED WIND TUNNFL 712	DU -	

INDEX OF PUBLISHED DATA ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACT DESCRIPTO	
2089	0A25	134,082		140A/B	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 661	Q1 -	
2090	LASC	134,080	•	089B-139B ORBITER CONFIGURATION	LARC - Unitary Plan Wind Tunnel 1040	P6 -	
2091	LA7B	141,512		LO-100 ORBITER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 657/660	P5 -	
2092	OA72		71968	ORBITER 139B (34-0)	LARC - 22-INCH HELIUM TUNNEL 415	PT -	유
2094	0\$1	134,073		BASIC WING AND 11 HZ INBD AND 13 5 HZ OUTBD ELEVON ROTATIONAL FREQ	LARC - 26-INCH TRANSONIC BLOWDOWN TUNNEL 545	QT -	OF POOR
2095	DA49	134,404		ORBITER	MSFC - 14-INCH TRISONIC WIND TUNNEL 581	92	PAGE IS
2096	0Н13	134,101		B10C5D7F4M3V5W87	LARC ~ MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 644	P0 -	₹ 00
. 2097	0A62A	134, 102		140A/B SSV ORBITER	NRLAD - LOW SPEED WIND TUNNEL 715	DW -	
2100	0H3B	134.075			AEDC - HYPERSONIC WIND TUNNEL (B) VA289	TM -	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2101	0H42A 0H42B 0H42C	134,076		B17C7M4F5W103E22V7R5	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 4080/4105 4130/4193	PA -
2102	IA15	134,089		OT+L+P1+A1+F	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 175	EG -
2103	IA62F	134,094	•	(034)(T14)(S12)	MSFC - 14-INCH TRISONIC WIND TUNNEL 589 TRISONIC WIND TUNNEL	94
2103	IA62F	134,094		(034)(T9)(S12)(PT4)(FR4)	MSFC - 14-INCH TRISONIC WIND TUNNEL 589 TRISONIC WIND TUNNEL	ORIGINAL OF POOR
2104 V-01	OA62B	134,112		140A/B SSV ORBITER	NRLAD - LOW SPEED WIND TUNNEL 717	
2104 V-02	OA62B	134,113		140A/B SSV GRBITER	NRLAD - LOW SPEED WIND TUNNEL 717	PAGE IS QUALITY
2106	LA14A LA14B		72630	O89B ORB W/MOD NOSE	LARC - UNITARY PLAN WIND TUNNEL 1046/1049	PG -
2107	LA20		72631	089B ORBITERW/MOD NOSE	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 653	PK -
2109	OH45	141,527		147B CONFIGURATION ORBITER MODEL (50-0)	LARC - FREON TUNNEL 121-137	QS -

ORIGINAL PAGE IS

INDEX OF PUBLISHED DATA ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2113	0A85	134,111		VL70-000139	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 101	QI
2114	OA86	134,098		B30 THRU B50C9M7F8W116E26V8R5X9	NRLAD - LOW SPEED WIND TUNNEL - 716 ,	DX .
2115	OA87	134,085		140A/B	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 176	EF · · · · ·
2116	0A91	134,888		B19C7F5J59W107E23V7R5X20 + NACELLE RAKES	NRLAD - 7-FOOT TRISONIC WIND TUNNEL - 278	DY.
2117	OH14	147,617		B22C7F5M4V7W111	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 648	QL.
2120	OA 106	134,426		ORBITER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 668	qz -
2121	LA38A			TASK CANCELLED, JULY, 1975	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 669	. QX
2124	IA16 OA26	134,093	•.	140A/B ORBITER CONFIGURATION	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 180	EM -
2125	88AO	134,409		BODY ALONE (-140A/B)	LARC - 22-INCH HELIUM TUNNEL - 422	. QC
2126	LA25			TASK CANCELLED, DEC., 1976	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 100	PX

	DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARAC DESCRIPTO	
Manusa "	2127	LA35		71954	-139 B ORBITER WITH VARIOUS CONTRO L DEFLECTIONS	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 102	QU	
	2128 V-01	OA53A	134,114		140A/B	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 747	EJ	
	2128 V-02	DASSA	134,115		140A/B	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 747	EJ	
	2130	OA22A	141,529	•	SSV 140A/B ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	B2	ORIGINAL OF POOR
	2131	OA22B	141,530		SSV 4 140A/B ORBITER	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 716	В4	AL PAGE IS OR QUALITY
	2132	LA42	141,535		-089B W/MOD NOSE	AEDC - HYPERSONIC WIND TUNNEL (B) - 48A	TP	ALIA See See See See See See See See See See
	2133	1A58	134,110		ORBITER	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 107	QK	
	2134 R-01	0A77 0A78	134,429		ORBITER -140A/B CONFIG	AEDC - HYPERSONIC WIND TUNNEL (B) - VA474	TN	
•	2135	LA13			TASK CANCELLED, AUGUST, 1974	HYPERSONIC WIND TUNNEL.(C) - LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 99	PF	

INDEX OF PUBLISHED DATA ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION .	TEST NUMBER	DATASET 2-CHARAC DESCRIPT	
2137 V-02	OA 105	134,106		CONFIGURATION3, MODEL 32-0	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 109 ,	H2 -	
2139	OA 118	134,407		VE70-000140A/B, MODEL 43-0	NRLAD - LOW SPEED WIND TUNNEL 724	F6 -	
2140	OA37	134,408		140 A/B SPACE SHUTTLE ORBITER	NRLAD - LOW SPEED WIND TUNNEL 719	F2 -	
2141	0H11	141,538		MODEL NO. 29-0/VL70-000139	AEDC - HYPERSONIC WIND TUNNEL (B) VA354	TS -	9 9
2147	0A20C	134,097		140A/B SSV ORBITER	LARC - UNITARY PLAN WIND TUNNEL 1057	Q2 -	ORIGINAL OF POOR
2149	OA9O	141,805		CONFIG. 4 (-140A/B) MODEL 72-0	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 110	- QJ	R QUALITY
2151	OH6 ,	141.815		THERMOCOUPLE MODEL OF SSV ORB 139	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL 183	EQ -	ALIA Si B
2152 R-01	OA81	134,423		VEHICLE 4 ORBITER (MODEL 51-0)	AEDC - Hypervelocity wind tunnel (f) VA489	то -	
2153	IH1	151,377		TANK ALONE	LARC - UNITARY PLAN WIND TUNNEL 1071	Q7 -	
2154	OH4A	134.437		MODEL 29-0	AEDC - HYPERSONIC WIND TUNNEL (B) VA352	- TT	

26

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTE DESCRIPTOR	
2155	DA 1 10	134,406		B61C11F12M51W124E40	NRLAD - LOW SPEED WIND TUNNEL - 721	F5	
2157	1H19	141,822		ORBITER WITH EXTERNAL TANK	LARC - HYPERSONIC NITROGEN TUNNEL - 28	QE	
2159 V-01	OA59	134,410		140 A/B SSV ORBITER	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL 709	ER	
2159 V~02	0A59	134,412	•	140 A/B SSV ORBITER	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL 709	ER	ORIGINAL OF POOR
2162	0A36	134,430		140 A/B, VEHICLE 4	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 187	EP	OR QUI
2163	0A20B	134,403		140A/B	LARC - UNITARY PLAN WIND TUNNEL 1097	Q2	PAGE IS QUALITY
2164 V-02	0H12 1H21	141,829		EXTERNAL TANK	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 173-100	ប់ថ	
2167	0A98	141,550		140A/B	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 190	EQ	
2171 V-01	0H38	144,584		140C ORBITER	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL '-	EZ	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARAC DESCRIPT	
2171 V-02	0H38	144,585		140C DRBITER	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 198	EZ	
2171 V-03	0H38	144,586	•	140C ORBITER	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 198	EZ	
2172	0EAO	134,415		SSV DRBITER CONF 2 (MODEL 21-0 DF VL70-000139)	LARC 60-FOOT VACUUM SPHERE VON KARMAN F ACILITIES R3289	H7	
2176	LA40		72661	139B ORBITER	LARC - 22-INCH HELIUM TUNNEL - 426	нз	ORIGINAL OF POOR
2177	0A83	141,510		140A/B SSV ORBITER	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 194	EW	
2178	OA53B	134,119		140A/B	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 747	EK	PAGE IS
2179	OS8A/B	151,378		SS ORBITER LOWER WING CARRY-THROUG H STRUCTURE WITH A DUMMY PANEL , A	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 705 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	EX	
2182	LA49	151,062		089B/139	LARC UNITARY PLAN WIND TUNNEL 1101	НJ	
2183	LA51		72661	140A/B	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 684	HV	

28

ORIGINAL PAGE IS

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2184	LA48	151,061		089B/140	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 680	ні
2185	OA53C	134,120		140A/B	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 747	EL -
2186	OA116	134,428		.015-SCALE ORBITER MODEL, CONFIGURA TION 140A/B (49-0)	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 686	HU
2187	OA 119A	134,421	·	140A/B SPACE SHUTTLE ORBITER INNER MOLD LINE CONFIGURATION, (MODEL 1	NRLAD - LOW SPEED WIND TUNNEL 726	F8
2190	OA 108	141,537		O.004-SCALE ORBITER FORCE MODEL (7	MSFC - 14-INCH TRISONIC WIND TUNNEL 599	- 1D
2191	LA47		72661	140A/B	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 104	HH -
2193	OH26	151,380		SS DRB. 140B MODEL (MODIFIED 22-0)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 199	E2
2195	OAB2	134,442		ORBITER CONFIG 3	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 113	HL -
2196	0A 79	141,531		ORBITER 140A/B	AEDC - Hypersonic wind tunnel (B) 71A	TW -
2198	OA 1 15	141,534		ORBITER 140A/B	AEDC ~ SUPERSONIC WIND TUNNEL (A) 71A	- TV

DMS DMS-ÐR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER		DATASET 2-CHARACT DESCRIPTO	R
2202	OA 123	141,526		140A/B OUTER MOLD LINE CONFIGURATI ON	NRLAD - LOW SPEED WIND TUNNEL 731	-	FA	,
2203	OA 1 19B	141,524		140C OUTER MOLD LINE CONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 730	-	F9	
2205	DA 109	141,532		RI SPACE SHUTTLE ORBITER VEHICLE 4 (MODIFIED) CONFIGURATION	LARC - 22-INCH HELIUM TUNNEL 431	-	HE	
2209	OA 124	141,536	•	MODEL 43-0	NRLAD - LOW SPEED WIND TUNNEL 736	-	FB	유
2211 V-01	CA5	141,800		O O3-SCALE 45-O (ORBITER) MODEL	TBCA - TRANSONIC WIND TUNNEL 1431	-	GM	ORIGINAL OF POOR
2211 V-02	CA5	141,803		O O3-SCALE 45-O (ORBITER) MODEL	TBCA - TRANSONIC WIND TUNNEL 1431	-	GM	PAGE IS
2211 V-03	CA5	141,804		O 03-SCALE 45-0 (DRBITER) MODEL	TBCA - TRANSUNIC WIND TUNNEL 1431	-	GM	₹ 55
2214	DA89	141,513		140C MODIFIED SPACE SHUTTLE ORBITE R MODEL 74-0	LARC - HYPERSONIC NITROGEN TUNNEL 30-31	-	QD	
2215	LA58	144,592	•	SSV ORBITER CONFIGURATION 140A/B-0 .015 SCALE	LTV - HIGH SPEED WIND TUNNEL 512	••	HY	
2221	OA143	141,548		1400 CONFIGURATION ORBITER (MODEL 16-0)	NRLAD - LOW SPEED WIND TUNNEL 737	-	FC	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER		DATASET 2-CHARACT DESCRIPTO	
2222 V-01	0H49B	147,626		B25C10M4F10E26R5V7W116	AEDC - Hypersonic wind tunnel (B) 57A	-	VI	•
2222 V-02	0H49B	147,627		B25C10M4F10E2GR5V7W116	AEDC - HYPERSONIC WIND TUNNEL (B) 57A	-	V1	
2225	0H4C	141,505	•	MODEL 21-0, LINES VL70-000139	AEDC - HYPERSONIC WIND TUNNEL (B) VA352	-	TZ	
2229	OA 102	141,508		SSV 140A/B	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 687	-	НМ	
2232	OA 131	141,521		MODEL 74-0, CONF 4	MSFC - 14-INCH TRISONIC WIND TUNNEL 607	-	1 M	ORIGINAL OF POOR
2233	LA59	151,068		72-0TS (B26C9E44F10FL10/11M16N2B/8 6PS1-SR5S21T2,V8W116	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 703	-	HZ ;	JAL P
2234	OA113	141,547	,	ORBITER WITH ELEVON AND BODY FLAP DEFLECTIONS	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 184-220	-	ин [,]	PAGE IS
2238	OA93	141,847		5t-0	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 184-120	-	UI	, 30
2241 V-01	0H39	160,490		MODEL 60-3, VEH 4	AEDC - HYPERSONIC WIND TUNNEL (B) 74A	-	V 9	
2241 V-02	0H39	160,491		MODEL 60-3, VEH. 4	AEDC - HYPERSONIC WIND TUNNEL (B) 74A	-	V9	

31

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2241 V-03	0H39	160,492		MODEL 60-3, VEH 4	AEDC - HYPERSONIC WIND TUNNEL (B) 74A	. V9
2241 V-04	0H39	160,493	•	MODEL 60-3, VEH 4	AEDC - HYPERSONIC WIND TUNNEL (B) 74A	V9 -
2245 V-01	OA161A/B/C	147,618		SPACE SHUTTLE VEHICLE ORBITER 140A /B (MODIFIED)	ARC - 11-FODT, 9-FOOT, 8-FOOT, UNITARY W' IND TUNNEL 094	• 9 9
2245 V-02	OA161A/B/C	147,619		SPACE SHUTTLE VEHICLE ORBITER 140A /B (MODIFIED)	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL 094	ORIGINAL OF POOR
2246	LA65	144,600		WING-BODY WITH VARIATIONS	ARC - 12-FOOT PRESSURE TUNNEL 086	PAGE IS
2247	OA 160	141,834		MODEL 51-0 OF MODIFIED VEH 4 ORB (B26 C9 E26 F7 M7 N28 R5 V8 W116)	AEDC - HYPERVELOCITY WIND TUNNEL (F) 28A	. va 2 2
2250	0H43	141,539		15-O, FLAT PLATE MODEL	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 182	ND .
2251	0Н9	141,540		MODEL 29-0/VL70-006139	AEDC - HYPERSONIC WIND TUNNEL (B) VA353	V5
2252	0H25A	141,546		ORB , 40(SEMISPAN, BODY FLUSH; LE AD EDGE; TRANSITION; SEMISPAN WING	AEDC - HYPERSONIC WIND TUNNEL (B) 83A	V6 -

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2254 V-01	OA148 OA148P	144,619		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	E8
2254 V-02	OA 148 OA 148P	144,620		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	E8
2254 V-03	OA 148 OA 148P	144,621		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	E8
2254 V-04	OA148 OA148P	144,622	•	VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	ORIGINAL OF POOR
2254 V-05	OA148 OA148P	144,623		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	NAL PA
2254 V-06	OA148 OA148P	144,624		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	PAGE IS QUALITY
2254 V-07	OA 148 OA 148P	144,625		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 073	E8
2254 V-08	OA148 GA148P	144,626		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 073	E8

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2254 V-09	0A148 0A148P	144,627		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	E8
2254 V-10	OA 148 OA 148P	144,628	•	VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	E8
2254 V-11	OA 148 OA 148P	147,601		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	E8 (),
2254 V-12	OA148 OA148P	147,602		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	ORIGINAL OF POOR
2254 V-13	0A 148 0A 148P	147,603		VEHICLE 5 ORBITER	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 073	ES PAGE IS
2257	LA69	151,369		OUTER MOLD LINE MODEL 72-OTS	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 714	J9 7 76
2259	LAGOA			TASK CANCELLED, MAY 1977	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 704	J1
2261 V-01	UA 100	167,364		ORBITER VEHICLE 101 WITHOUT TAILCO NE	ARC - 40-FOOT BY 80-FOOT SUBSONIC WIND T UNNEL - 462	NA

DMS DMS-DR-	NASA SERIES Number	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2261 V-02	OA 100	167,365		ORBITER VEHICLE 101 WITHOUT TAILCO	ARC - 40-FOOT BY 80-FOOT SUBSONIC WIND T UNNEL 462	NA	
2263	0Н74	144,596		140 C ORB (B62 C12 E52 F10 M16 R19 V8 W127)	AEDC - HYPERSONIC WIND TUNNEL (B) B8A	VB	
2264	LA62	141,843		SSV ORBITER 49-O MODIFIED	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 717	J3 -	
2265	OA 159	141,832	ı	CONFIG 1 ORBITER WITH NOSE AND TAI L RCS JETS	ARC - 12-FOOT PRESSURE TUNNEL 078	NG -	
2266	LA67	144,607		140A/B/C=B26 C9 E43 F8 M16 N28 R5 V8 W	LTV - HIGH SPEED WIND TUNNEL 552	FD	_
2267 V-01	MA22	147,604		REACTION CONTROL SYSTEM	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 118	OF POOR	בהום ב בהום ב
2267 V-02	MA22	147,605		REACTION CONTROL SYSTEM	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 118	_ ^	AI PA
2267 V-03	MA22	147,606		REACTION CONTROL SYSTEM	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 118	QUALITY	e I
2267 V-04	MA22	147,607		REACTION CONTROL SYSTEM	LARC - CONTINUOUS-FŁOW HYPERSONIC TUNNEL 118	JΑ	
*2268 V-01	CA9 CA9P	151,396		ORBITER 47-0	TBCA - TRANSONIC WIND TUNNEL 1477	GQ -	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2268 V-02	CA9 CA9P	151,397		ORBITER 47-0	TBCA - TRANSONIC WIND TUNNEL 1477	GQ -
2268 V~03	CA9 CA9P	151,398		ORBITER 47-0	TBCA - TRANSONIC WIND TUNNEL 1477	GQ -
2268 V-04	CA9 CA9P	151,399		ORBITER 47-D	TBCA - TRANSONIC WIND TUNNEL 1477	GQ -
2268 V-05	CA9 CA9P	151,400		ORBITER 47-0	TBCA - TRANSONIC WIND TUNNEL 1477	ORIGINAL OF POOR
2269	LA7O	147,624		140A/B/C=B26 C9 E43 F8 M16 N28 R5 V8 W	CALSPAN - 8-FOOT TRANSONIC WIND TUNNEL T18-103	
2270	LA63A	144,579		ORBITER W/ INDEPENDENTLY-OPERATED LEFT.RIGHT ELEVON SURFACES	LARC - Unitary plan wind tunnel 1118	PAGE IS OUALITY
2271	, LA71A/B	151,044		MODEL 69-O WITH FOREBODY RSI MODS	LARC - UNITARY PLAN WIND TUNNEL 1147 1132	JC ≺ 🗖 -
2273 V-01	CA26	144,612		48-0 (02, 04, 06, S1, ATY, ATX)	LTV - HIGH SPEED WIND TUNNEL 559	FE -
2273 V-02	CA26	144,613	•	48-0 (02, 04, 06, S1, ATY, ATX)	LTV - HIGH SPEED WIND TUNNEL 559	FE -
2273 V-03	CA26	144,614		4B-O (02, 04, 06, S1, ATY, ATX)	LTV - HIGH SPEED WIND TUNNEL 559	FE -

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTE DESCRIPTOR	
2273 V-04	CA26	144,615		48-0 (02, 04, 06, S1, ATY, ATX)	LTV - HIGH SPEED WIND TUNNEL 559	FE -	
2273 V-05	CA26	144,616		48-0 (02, 04, 06, S1, ATY, ATX)	LTV - HIGH SPEED WIND TUNNEL 559	FE -	•
2275 V-01	CA23B	144,603		O.O125-SCALE 747 MODEL	ARC - 14-FOOT TRANSONIC WIND TUNNEL 120	NH -	
2275 V-02	CA23B	144,604		O O125-SCALE 747 MODEL	ARC - 14-FOOT TRANSONIC WIND TUNNEL 120	NH -	ORIGINAL OF POOR
2278	LA61		•	TEST CANCELLED, MAY 1976	LARC - LOW-TURBULENCE PRESSURE TUNNEL 219	J2 -	AL PA OR QU
2279	FW63B	144,606		140A/B/C (B26 C9 E43 F8 M16 N28 R5 V8 W)	LARC " UNITARY PLAN WIND TUNNEL 1151	- J4	PAGE IS
2280	LA28	144,582		FLAT-PLATE MODEL WITH THIN-FILM H EAT FLUX GAGES	LTV ~ HIGH SPEED WIND TUNNEL 498	QB -	
2281	LA66	147,621		BASELINE	ARC - 12-FOOT PRESSURE TUNNEL 135-1	NU -	
2283	MA 14	147,649		ORBITER 089B	LTV - LOW SPEED WIND TUNNEL 422	FG -	
2285	0H50A	144,595		82-0, WITH AND WITHOUT PROTUBERANC ES, 50% FOREBODY MODELS	AEDC - HYPERSONIC WIND TUNNEL (B) VA526/21BA	ve 	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTEI DESCRIPTOR	
2286	D A220	147,625		SSV ORBITER (MODEL 57-0) FOREBODY WITH TPS TILES ALONE	ARC - 14-FOOT TRANSONIC WIND TUNNEL 150-1	NL -	
2288	OH64	151,384		BASE HEATING MODEL 25-0	LERC - SPACE POWER FACILITY	GG -	
2289 V-01	UA163	147,611	•	SPACE SHUTTLE ORBITER 140C	NRLAD - LOW SPEED WIND TUNNEL 751	FF -	ORIG OF I
2289 V-02	0A163	147,612		SPACE SHUTTLE DRBITER 140C	NRLAD ~ LOW SPEED WIND TUNNEL 751	FF -	ORIGINAL OF POOR
2289 V-03	DA163	147,613		SPACE SHUTTLE ORBITER 140C	NRLAD - LOW SPEED WIND TUNNEL 751	FF -	Alitynd Si 35vd
2289 V-04	0A163	147,614		SPACE SHUTTLE ORBITER 140C	NRLAD - LOW SPEED WIND TUNNEL 751	FF -	₹ %
2290 V-01	CAB	147,641		747 ALONE	EARC - V/STOL TRANSITION RESEARCH WIND TU NNEL 129	JF -	
2290 V-02	CAB	147,642		747 ALONE	LARC - V/STOL TRANSITION RESEARCH WIND TU NNEL 129	∂F ~	
2290 V-03	CA8	147,643		747 ALONE	LARC - V/STOL TRANSITION RESEARCH WIND TU NNEL 129	JF ~	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARAC DESCRIPTO	
2294 V-01	OA172	160,822		140A/B SS ORBITER (MODEL 43-0) ORB ITER FERRY CONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 752	FG -	
2294 V-02	OA 172	160,823		140A/B SS ORBITER (MODEL 43-0) ORB ITER FERRY CONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 752	FG 	
2296 V-01	LA81	147,609		.03614-SCALE ORBITER MODEL OF A OB 9B CONFIGURATION WITH A 139B CONFI	LARC ~ LOW-TURBULENCE PRESSURE TUNNEL 229	JP 	
2296 V-02	LA8†	147,610		O3614-SCALE ORBITER MODEL OF A O8 9B CONFIGURATION WITH A 139B CONFI	LARC - LOW-TURBULENCE PRESSURE TUNNEL 229	JP -	
2297	LA45A/B	147,628	•	WING	LARC - UNITARY PLAN WIND TUNNEL 1145	HB -	0.0
2298	LA73A LA73B	151,409		SSV ORBITER MODEL 69-0	227	JE -	ORIGINAL OF POOR
2300 ´	LA61B	147,629		140A/B/C (B26 C9 E43 F8 M16 N28 R5 V8 W)	LARC - LOW-TURBULENCE PRESSURE TUNNEL 228	JT ·	SI JEVA
2301	OH54A	144,605		MODELS 82-1, -3, -5, -8, -11, ALL 50 PERCENT FOREBODIES	AEDC - HYPERSONIC WIND TUNNEL (B) 82A	VH -	7 5
2302 V-01	OA 174	167,340		ORBITER VEHICLE 101 WITH TAIL CONE	ARC - 40-FOOT BY 80-FOOT SUBSONIC WIND T UNNEL 479	NO -	

39

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACT DESCRIPTO	
2302 V-02	OA 174	167,341		ORBITER VEHICLE 101 WITH TAIL CONE	ARC - 40-FOOT BY 80-FOOT SUBSONIC WIND T UNNEL - 479	NO	,
2303	0H75	144,618	•	MODELS 82-1, -4, 50 PERCENT FOREBO DIES	AEDC - HYPERSONIC WIND TUNNEL (B) - E3A	VG	
2304	OA 173	160,846		TAILCONE-ON	ARC - 12-FOOT PRESSURE TUNNEL - 180-1	NS	ORIO OF
2305 V-01	LA76	151,059		B26C9E43F8M16N28R5V8W	LTV - HIGH SPEED WIND TUNNEL - 573	FI	ORIGINAL OF POOR
2305 V-02	LA76	151,060		B26C9E43F8M16N28R5V8W	LTV - HIGH SPEED WIND TUNNEL - 573	FI	PAGE IS
2307 V-01	CA14A	160,840		BOEING 747 CAM/ORBITER - ALT CONFI GURATION	TBCA - TRANSONIC WIND TUNNEL - 1496 1497	GR	₹ छ
2307 V-02	CA14A	160,841		BOEING 747 CAM/ORBITER - ALT CONFIGURATION	TBCA - TRANSONIC WIND TUNNEL - 1496 1497	GR	
2309	LA72	147,644		FOREBODY 81, 86, 87	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 740	JD ,	
2311	LA78 LA87 LA88	147,620		858C5E18F4R5V5W87-VEHICLE 2A (MODI FIED)	LARC - FREON TUNNEL - 267-268 22-INCH HELIUM TUNNEL - 446	J5	

40

INDEX OF PUBLISHED DATA

ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER		DATASET 2-CHARACTER DESCRIPTOR
2314	OA 176	151,406		LANDING	NRLAD - LOW SPEED WIND TUNNEL 754	-	FJ
2317	OH53A	151,787		O O4-SCALE (83-O)ORBITER	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL 216	-	NV
2318 V-01	LA75	147,646		ORBITER-140A/B/C=B26 C9 E43 F8 M16 N28 R5 V8 W	LARC - Unitary plan wind tunnel 1173 .	-	JH
2318 V-02	LA75	147,647		ORBITER-140A/B/C=B26 C9 E43 F8 M16 N28 R5 V8 W	LARC - Unitary plan wind tunnel 1173	-	JH
2320 V-01	OA 169	151,390	•	ORBITER 0.0125 70-0T	AEDC - HYPERSONIC WIND TUNNEL (B) D8A	-	٧J
2320 V-02	OA 169	151,391		ORBITER O 0125 70-0T	AEDC - HYPERSONIC WIND TUNNEL (B) D8A	-	VJ
2320 V-03	OA 169	151,392		ORBITER O 0125 70-0T	AEDC - HYPERSONIC WIND TUNNEL (B) D8A	-	VJ
2321 V-01	0H69	151,410		ORBITER VEHICLE FOREBODY	AEDC - Hypersonic wind tunnel (B) V41B-E9A	-	VM
2321 V-02	OH69	151,411		ORBITER VEHICLE FOREBODY	AEDC - HYPERSONIC WIND TUNNEL (B) V41B-E9A	-	VM
2322	OA228	160,847		SPACE SHUTTLE ORBITER VEHICLE 102	NRLAD - LOW SPEED WIND TUNNEL 757	-	FL

ORIGINAL PAGE IS OF POOR QUALITY

ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
,2329	OA224	160,837		SSV DRBITER (MODEL 57-0) FOREBODY W/ ADP, FTP, AND ADP AND FTP	LARC - 16-FOOT TRANSONIC TUNNEL - 312	JU
2330	0H52	147,637		CONF 4, MODEL 29-0	AEDC - HYPERSONIC WIND TUNNEL (B) - 524	vo
2332	CA13	151,373	•	DRBITER- TAILCONE DN, TC23, STING MOUNTED	ARC - 14-FOOT TRANSONIC WIND TUNNEL - 121	NZ ,
2333 V-01	OA 175	151,374		01+TC23'ALT' CONFIGURATION WITH TA ILCONE	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 187-1	24
2333 V-02	OA 175	151,375		O1+TC23'ALT' CONFIGURATION WITH TA ILCONE	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 187-1	ORIGINAL OF POOR
2333 V-03	DA 175	151,376		O1+TC23'ALT' CONFIGURATION WITH TA ILCONE	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 187-1	2A QUALITY
2336	LA 145	167,375		LARC 0098-SCALE CAST ALUMINUM	LARC - UNITARY PLAN WIND TUNNEL - 1345 1390	7H 7 5
2337	0A236	151,786		FLIGHT TEST PROBE CALIBRATION	NRLAD - LOW SPEED WIND TUNNEL - 759	FM
2340 V-01	0H98	160,501		O 0175-SCALE THIN-SKIN THERMOCOUPL E SHUTTLE ORBITER 60-0	AEDC - HYPERSONIC WIND TUNNEL (B) - J7A	VS

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DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2340 V-02	0 H98	160,502		O.0175-SCALE THIN-SKIN THERMOCOUPL E SHUTTLE ORBITER 60-0	AEDC - HYPERSONIC WIND TUNNEL (B) J7A	. vs
2342	0H54B	151,074		MODEL 82-0 50% FOREBODY	AEDC - HYPERSONIC WIND TUNNEL (B) 82A	VM -
2343	LA85	160,849		ATP ORBITER	LARC - 22-INCH HELIUM TUNNEL 445	JY .
2344 V-01	LA77	151,788		ORBITER-140A/B/C=B26 C9 E43 F8 M16 N28 R5 V8 W	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 200-1	2B -
2344 V-02	LA77	151,789	•	ORBITER-140A/B/C=B26 C9 E43 F8 M16 N28 R5 V8 W	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 200-1	ORIGINAL OF POOR
2348 V-01	CA 15B	160,483		747-100 WITH CAM TYPE II KITS ATTA CHED	UW - LOW SPEED WIND TUNNEL 1178	QUALITY
2349	CA 17	151,379		ORBITER B26.1C9E44F8M16R5V8W116	UW - LOW SPEED WIND TUNNEL 1184	GW T
2350	OH46	151,065		140B ORB., MODEL 90-0	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 4502-4601	QR -
2351	OA238	160,853		ORBITER 102 FOREBODY	NRLAD - LOW SPEED WIND TUNNEL 764	FN -

ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2352	LA91	151,383		ORBITER 140A/B/C B26C9E43F8M16N28 R5V8W	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 758	J6
2353	LA89	160,827		ALT	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 213-1	2E -
2355	ОН49А	151,066		B17 C7 E22 F7 M4 W104	AEDC - SUPERSONIC WIND TUNNEL (A) VA525/218A	VW -
2356	0H60	151,064		MODEL 83-0 (B60 C10)	AEDC - HYPERSONIC WIND TUNNEL (B) B7A	· · · 아
2358	0 H50B	151,067		FORWARD 50 PERCENT FUSELAGE, MODEL 83-0	AEDC - HYPERSONIC WIND TUNNEL (B) 58A	OF POOR
2359	OH66	151,405		ROCKWELL VEHICLE 3 (MODIFIED) SHUT TLE ORBITER. MODEL 66-0	CALSPAN - 96-INCH HYPERSONIC SHOCK TUNNEL 131	UUALITY
2360 V-01	0A221B/C	160,521		ORBITER VEHICLE 102 FOREBODY	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 119-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 119	21 ⋜ ७ -
2360 V-02	OA221B/C	160,522		ORBITER VEHICLE 102 FOREBODY	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 119-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 119	2I -

ORIGINAL PAGE IS

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
236 f V-0 f	OA 163B	151,370		B68C12E55F10M16N28R5V8W127X9	NRLAD - LOW SPEED WIND TUNNEL 768	FP.	
2361 V-02	OA 163B	151,371		B68C12E55F1OM16N28R5V8W127X9	NRLAD - LOW SPEED WIND TUNNEL 768	F P -	
2363	057	151,057		55-0 (FIN, RUDDER)	LARC - TRANSONIC DYNAMICS TUNNEL 246	HR .	
2364 V-01	OA 145B	160,527		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R20V27VT10VT11VT12VT13VT14	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 118-1	^{G2} - 유요	ł
2364 V-02	OA 1458	160,528	•	B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 118-1	OF POOR) 0 a
2364 V-03	OA 145B	160,529		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 118-1	QUALITY	
2365	0\$6	151,056		MODEL 54-0	LARC - TRANSONIC DYNAMICS TUNNEL 246	HR -	•
2366	0H25B	151,063		140C (B17C7E22F5M4R5V7W103	AEDC - HYPERSONIC WIND TUNNEL (B) 41B-83A	· VY	
2367	0H57A/B	151,773		MODEL 91-0 ORBITER 102, DRWG VC- 70-000002B	AEDC - HYPERSONIC WIND TUNNEL (B) V418-K3A	4A -	

ORIGINAL PAGE IS

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2368	OH5 †	151,058		MODELS 46-0, 64-0 90-0	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 112	HD
2370 V-01	OA149B/C	151,790		B70C9E44F9M16N2BR5V8W116(ORBITER)	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 115-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 115-1	2К
2370 V-02	0A149B/C	151,791		B70C9E44F9M16N28R5V8W116(URBITER)	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 115-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 115-1	2К
2370 V-03	0A149B/C	151,792		B70C9E44F9M16N28R5V8W116(ORBITER)	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 115-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 115-1	2K
2371	OH78	151,408		ORBITER VEHICLE 102	JSC - 56-A-76	GN
2373	LA99	160,821		LARC BUILT MODEL 201-0 0 030 SCALE SSV ORBITER WITH REMOTE ELEVONS	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 769	кэ
2374	LA82 LA103	167,372		B20F4M16W87E19V5R5TC4	CALSPAN - 8-FOOT TRANSONIC WIND TUNNEL - T18-111 T18-113 ,	UN

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM~X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2375	OA237	160,530		ORBITER VEHICLE 102 FOREBODY	ARC - 40-FOOT BY 80-FOOT SUBSONIC WIND T UNNEL - 500	2M
2376 V-01	OA 149A	151,779	,	B70C9E44F9M16N28R5V8W116(ORBITER)	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 115	2К
2376 V-02	OA 149A	151,780		B70C9E44F9M16N28R5V8W116(ORBITER)	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 115	2К
2376 V-03	OA 149A	151,781	•	B70C9E44F9M16N28R5V8W116(ORBITER)	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 115	2K
2380 V-01	OA 145A	151,801		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 118-1	ORIGINAL OF POOR
2380 V-02	OA145A	151,802		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 118-1	AL PAGE IS OR QUALITY
2380 V-03	OA145A	151,803		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R20V27VT10VT11VT12VT13VT14	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 118-1	2F TY
2380 V-04	OA 145A	151,804		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 118-1	2F

ORIGINAL PAGE IS OF POOR QUALITY

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2380 V-05	OA 145A	151,805		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 118-1	2 F
2380 V-06	OA 145A	151,806		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 118-1 -	2F
2381	LA 107			TEST CANCELLED SEPTEMBER 1978	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 780	KF
2382	0H8 109	151,382		MODEL 25-0 (VEH 2A AFT OF STA XO = 1400 AND PROP SIMULATION SYS)	MSFC - NASA/MSFC IMPULSE BASE FLOW FACILI TY - 027	1U
2385	OH15	151,366		MODEL 53-0 (ELEVON/WING GAP)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 173	ED
2386	DH44	151,368		MODEL 53-0 (ELEVON/ELEVON GAP)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 177	EH
2387	LA 104			TEST CANCELLED SEPTEMBER 1978	LARC - LOW-TURBULENCE PRESSURE TUNNEL - 246	КА
2389 V-01	OA145C	160,810		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 118-1	2H
2389 V-02	OA145C	160,811		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 118-1	2H

ÐMS DMS~DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIA	ACTER
2389 V-03	OA 145C	160,812		B75C16E64F16FD3FR22HG1M52N108N109N 110N111R2OV27VT10VT11VT12VT13VT14	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 118-1	2H	
2390	LA101	160,481		MODEL 44 O SSV ORBITER WITH REMOTE CONTROLLED ELEVONS	LARC - Unitary plan wind tunnel - 1194	KD	
2392	OA250	151,389		MODEL 45-0 ORB, 140A/B CONF. (MODIFIED)	NRLAD - LOW SPEED WIND TUNNEL - 775	FQ	
2395	LA111	151,394		MODEL 44-0 (SILTS POD)	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 786	KJ	
2396	LA110	151,393	•	MODEL 44-0 (SILTS POD)	LARC - UNITARY PLAN WIND TUNNEL - 1212	KI	ORIGINAL OF POOR
2399	LA 114	151,388		MODEL 44-0 (SILTS POD)	LARC - UNITARY PLAN WIND TUNNEL - 1217	кк	
2400	OA234	160,518		ORBITER VEHICLE 102 FÖREBODY	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 042	GY	PAGE IS
2402	0A223 '	151,763		B75C16F64F16FD3FR22HG1M52N108N109N 11ON111R2OV27VT10VT11VT12VT13VT14	NRLAD - LOW SPEED WIND TUNNEL - 766	FO	
2405 V-01	DA 101	151,756		OV 102	ARC - 12-FOOT PRESSURE TUNNEL - 218-1	20	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2405 V~02	DA 1 01	151,757		0V102	ARC - 12-FOOT PRESSURE TUNNEL 218-1	2Q -	
2405 V-03	OA 101	151,758		0V102	ARC - 12-FOOT PRESSURE TUNNEL - 218-1	20	
2405 V-04	OA 101	151,759	•	0V102	ARC - 12-FOOT PRESSURE TUNNEL 218-1	2Q	
2405 V-05	DA 101	151 760		0V102	ARC - 12-FOOT PRESSURE TUNNEL 218-1	. 2Q	ORIGINAL OF POOR
2405 V-06	0A101	151,761		0V102	ARC - 12-FOOT PRESSURE TUNNEL 218-1	. 2Q	
2409	LA115	160,842		ORBITER	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 803	KL -	PAGE IS
2410	0H56	151,777		ORBITER WING TIP (MODEL 91-0)	AEDC/ - HYPERSONIC WIND TUNNEL (B) V41B-R3A	HT -	₹ 56
2414 V-01	OA232	160,484		B74C16N1O8PR4PR7PR8PR14VT18VT19	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) 431	VR	
2414 V-02	OA232	160,485		B74C16N1O8PR4PR7PR8PR14VT18VT19	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) 431	VR	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIP	
2415 V-01	0 A208/209	151,784		SSV 102 ORBITER CONFIGURATION MODE L 105-0	AEDC - SUPERSONIC WIND TUNNEL (A) - V41B-P5A	41	
2415 V-02	DA208/209	151,785		SSV 102 ORBITER CONFIGURATION MODE L 105-0	AEDC - , SUPERSONIC WIND TUNNEL (A) - V41A-P5A	4 J	
2417	OH58	151,770		93-0 FLAT PLATE	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 235	2X	
2419	OA270B/C	151,762		SSV 0V102 DRBITER CONFIGURATION MO DEL 104-0 INSTRUMENTED ELEVONS	LARC - 16-FOOT TRANSONIC TUNNEL - 325	KP	OR!
2420	OH103A	167,385		MODEL 83-0 LINES VL70-000140C	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-V2A	4H	ORIGINAL OF POOR
242† V-01	OA251B/C	160,495		99~0	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 282-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	27	PAGE IS QUALITY
2421 V-02	0A251B/C	160,496		99-0	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 282-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	2Z	
2424 V-01	OA126A,B,C	160,506		B62C9E64F9M16RSV8W131N112FD3N28	ARC 11-F00T, 9-F00T, 8-F00T, UNITARY W IND TUNNEL 289-1 9-F00T BY 7-F00T SUPERSONIC WIND T UNNEL (UNITARY)	2Y	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2424 V-02	OA126A,B,C	160,507		B62C9E64F9M16R5V8W131N112FD3N28	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL - 289-1 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	2Y	
2424 V-03	OA126A,B,C	160,508		SSV 102 ORBITER CONFIGURATION 47-0	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL - 289-1	зн	
2426	LA 124		TP1186	140A/B DRBITER	LARC - UNITARY PLAN WIND TUNNEL - 1207 LG2	KR Ç	율
2430 V-01	0A270A	160,817		0V102(MODEL 39-0)	LARC - 16-FOOT TRANSONIC TUNNEL - 326		ORIGINAL
2430 V-02	0A270A	160,818		0V102(MODEL 39-0) .	LARC - 16-FOOT TRANSONIC TUNNEL - 326	ę QUALI	PAGE IS
2430 V-03	0 A27 0 A	160,819		0V102(MODEL 39-0)	LARC - 16-FOOT TRANSONIC TUNNEL - 326	KN 🕇	, in
2432	LA 125	160,845		DV102 (105-0)	LARC - UNITARY PLAN WIND TUNNEL - 1243	KS	
2433	OA 171	151,764		O O2 SCALE ORBITER VEHICLE 102 (MD DEL 105-0), MODIFIED MODEL 89-0	NSWC 1310	GJ	
2434	OA 129	151,782	•	ORBITER (47.0) OV102 WITH RIGID AN D FLEXIBLE TAIL	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 507	4N	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIP	
2436 V-06	LA126		72661			кт	
2443	0H79	151,769		65-0 SS ORBITER BASE HEATING MODEL	USC - 61-A-78	5A	
2445 V-01	OA 146	167,652		SSV 14DA/B/C/R ORBITER	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 318-1	36	-air-
2445 V-02	OA 146	167,653		SSV 14DA/B/C/R ORBITER	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 318-1	зс	
2450	OS4A OS4B OS12	151,774	•		ARC - 2-FOOT BY 2-FOOT TRANSONIC WIND TU NNEL - 041,154,11 6	37	ORIGINAL OF POOR
2451	DH90A/MA29	151,772			AEDC - HYPERSONIC WIND TUNNEL (B) - P4A	45	PAGE IS
2454 V-03	LA57		72661	140A/B ORBITER-BASELINE	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 114	нх	75
2455	0H102A	151,778		140C ORBITER WITH SLAB SIDED VERTI	AEDC - HYPERSONIC WIND TUNNEL (B) - 418-65	4 T	
2464 V-01	OH84B	160.828		B62C12ES2F10M16V30W127 (56-0)	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-67	4 U	

INDEX OF PUBLISHED DATA ORBITER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA GR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2464 V-02	0H84B	160,829		B62C12ES2F10M16V30W127 (56~0)	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-67	4U
2464 V-03	0H84B	160,830		B62C12ES2F10M16V30W127 (56-0)	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-67	4U
2464 V-04	0H84B	160,831	•	B62C12ES2F10M16V30W127 (56-0)	AEDC (- HYPERSONIC WIND TUNNEL (B) - V41B-67	4 U
2464 V-05	0H105	160,832		B62C12E52F10M16R18V8W116T38S26 (6 O-0)	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-67	4V Ç
2468	0H105B 0H84C	167,352		ORBITER	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 247 246	م ک
2469 ,	05302A	167,367			ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 503-1	AL CH
2472	0H400	160,494		B75C16E64F16M52W131V29	AEDC - SUPERSONIC WIND TUNNEL (A) - V418-65	4X
2473 V-01	0A252	167,388		TPS TILE CAVITY FLOW FIELD MODEL	ARC - ' 2-FOOT BY 2-FOOT TRANSONIC WIND TU NNEL - 382-1 '	эт
2473 V-02	0A252	167,389	,	TPS TILE CAVITY FLOW FIELD MODEL	ARC - 2-FOOT BY 2-FOOT TRANSONIC WIND TU NNEL 382-1	зт

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DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2477	LA141A/B	160,825		ORBITER 74-0	LARC - 20-INCH HYPERSONIC TUNNEL (MACH 6) - 6546	ΚZ
2478 V-01	£A131	160,503		B75C16E64F16FR22HG1M52N108N109N110 N111R2OV27	LARC - UNITARY PLAN WIND TUNNEL - 1299	7A
• 2478 V-02	LA131	160,504		B75C16E64F16FR22HG1M52N108N109N110 N111R20V27	LARC - UNITARY PLAN WIND TUNNEL - 1299	7A
2478 V-03	LA131	160,505		B75C16E64F16FR22HG1M52N108N109N110 N111R2OV27	LARC - UNITARY PLAN WIND TUNNEL - 1299	7 A
2482 V-01	0 A400	160,814	,	ORBITER - 470	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 427-1 427-2	эх
2482 V-02	0A400	160,815		ORBITER - 470	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 427-1 427-2	эх
2482 V-03	0A400	160,816		ORBITER - 470	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 427-1 427-2	зх
2483 V-01	0 \$49	167,357			AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - TF-556	T5

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2483 V-02	0\$49	167, 358			AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - TF-556	TS
2485	0550 0550A	167,361		CALIBRATION PANEL	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 425 425-1	AC
2486 V-01	OA253	167,368		B64C14E63F14M18N92N94R18U2V23W129	AEDC TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) 572	4Y Q 1
2486 V-02	OA253	167,369		B64C14E63F14M18N92N94R18U2V23W129	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 572	4Y POOR Q
2487	0S43 0S51 0S51B 0S51C	167,362		HRSI TILED PANEL	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 380-1 436-1,3	QUALI TY
2488	08300	160,835		AFRSI PANEL	ARC - 2-FOOT BY 2-FOOT TRANSONIC WIND TU NNEL 458	AE
2489	0\$56	167,366			AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) TF-608	Т8
2490 V-01	0H109	167,349		56-0	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-G9	42

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	:	DATASET 2-CHARACTE DESCRIPTOR	
2490 V-01	0H109	167,349		60-D	AEDC - HYPERSONIC WIND TUNNEL (B) V41B-G9	-	4Z	
2490 V-02	0H109	167.350		56-0	AEDC - HYPERSONIC WIND TUNNEL (B) V41B-G9	-	4Z	
2490 V-02	0H109	167,350		60-0	AEDC - HYPERSONIC WIND TUNNEL (B) V41B-G9	-	42	
2490 V-03	0H109	167,351		60-0	AFDC - HYPERSONIC WIND TUNNEL (B) V41B-G9	-	4Z	
2490 V-03	DH109	167,351		56-0	AEDC - Hypersonic Wind Tunnel (B) V41B-G9	-	42	ORIGINAL OF POOR
2492	0H107	167,359		OV-102 (RIGHT HAND WING AND TRUNCA TED AFT FUSELAGE)	AEDC - HYPERSONIC WIND TUNNEL (B) V43B-17	-	Т2	JAL PA
2494	0H108	167,360		DV-102 ELEVON GAP	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL 254	-	AH	PAGE IS
2495	0H110	160,844		60-0	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 253	-	AG	•
2495	0H110	160,844		56-0	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 253	-	AG	
2496 V-01	OH111	167,380		O 0175-SCALE 56-0	AEDC - HYPERSONIC WIND TUNNEL (B) V41B-1C	-	T6	

57

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2496 V-02	DH111	167,381		O 0175-SCALE 56-0	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-1C	Т6
2496 V-03	OH111	167,382		0.0175-SCALE 56-0	AEDC - HYPERSONIC WIND TUNNEL (B) - V41B-1C	Т6
2499	OA164	160,836		B69C14DT1E54F14FD1FD2FR12HA1HG1M18 N92N94N107PR1R18V23VT1VT2W129	ARC - 40-FOOT BY 80-FOOT SUBSONIC WIND T UNNEL - 473	^{MM}
2500	0\$301	160,848		115-0 AFRSI MATERIAL PANELS	ARC - 2-FOOT BY 2-FOOT TRANSONIC WIND TU NNEL - 467-1	ORIGINAL OF POOR
2501	D\$304A	167,373			ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 501-1	Page is Quality
2502	OS304B	167,378			ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 501-1	AQ
2503	0553A 0S53B	167,363		20A	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 905,6,7,9	70
2504	0S302B	167,379	•	•	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 503-1	AO

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2505	OS46A-G	167,376		~	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - TF-551	7T
2506	OS60,1,2,3	167,384			ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) " 500,07,31 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) "	2A
2508	05306A/B	167,650		FIXTURE 96-0	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 548-1 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY)	ORIGINAL I
2509	0A307A/B	167,654	•	FLAT PANEL W/FRCI-12 TILES	ARC - 549-1 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	PAGE IS QUALITY
2510	A608S0	167,651			ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 548-1	AY

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACT DESCRIPTO	
2006	IA1A	120,088		MSFC/NR PARAMETRIC LAUNCH VEHICLE	MSFC - 14-INCH TRISONIC WIND TUNNEL 556	77	
2010	IA1B	120,060		NR ATP ORBITER/TANK AND SRMS ON AN D OFF	MSFC - 14-INCH TRISONIC WIND TUNNEL 545	. 72	
2011	MA9F	120,089	•	NR ATP ORBITER/EXTERNAL TANK AND S RBS	MSFC - 14-INCH TRISONIC WIND TUNNEL 558	78	<u> </u>
2013	IA2	128,762		SHUTTLE ORBITER/TANK SRM (N-040A)	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 616	BJ -	ORIGINAL OF POOR
2015 V-01	IA4	120,091		NASA SSV ORBITER ON NR EOHT WITH S INGLE BSRM	LTV - HIGH SPEED WIND TUNNEL 458	DE -	PAGE QUAL
2015 V-02	IA4	120,091		NASA SSV ORBITER ON NR EOHT WITH S INGLE BSRM	LTV - HIGH SPEED WIND TUNNEL 458	DE -	N E
2018	EAI	128,755		ATP LAUNCH CONFIGURATION	NRLAD - LOW SPEED WIND TUNNEL 693	р н	
2024	1A7	128,766		O4OA SPACE SHUTTLE INTEGRATED VEHICLE	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 686	BL -	
2026	IABIF	128,778		MCR 0074 BASELINE LAUNCH VEHICLE	MSFC - 14-INCH TRISONIC WIND TUNNEL 566	81	

INDEX OF PUBLISHED DATA INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2027 V-01	IA32F8	141,807		ORB WITH ET AND 2 SRB'S	MSFC - 14-INCH TRISONIC WIND TUNNEL - 567	82
2027 V-02	IA32FB	141,808		ROB WITH ET AND 2 SRB'S	MSFC - 14-INCH TRISONIC WIND TUNNEL - 567	82
2027 V-03	IA32FB	141,809		ORB WITH 2 SRB'S	MSFC - 14-INCH TRISONIC WIND TUNNEL - 567	ORIGINAL OF POOR 82 83 83
2028 V-01	IA31FB	134,434		MCR 0074 ORBITER LAUNCH	MSFC - 14-INCH TRISONIC WIND TUNNEL - 570	OR QU
2028 V-02	IA31FB	134,436	•	MCR 0074 DRBITER LAUNCH	MSFC - 14-INCH TRISONIC WIND TUNNEL 570	PAGE IS
2032 V-01	IA9A,B,C OA12A,C	128,794		17-DTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	8-
2032 V-02	IA9A,B,C OA12A,C	128,794		17-OTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND TO UNNEL (UNITARY) 707	B~ -

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	,	TEST NUMBER	DATASET 2-CHARACTE DESCRIPTOR	
2032 V-03	IA9A,B,C GA12A,C	128,794	•	17-OTS		ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	B- -	
2032 V-04	IA9A,B,C OA12A,C	128,794	•	17-OTS		ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	B- -	
2032 V-05	IA9A,B,C GA12A,C	128,794		17-OTS		ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707		ORIGINAL OF POOR (
2032 V-06	IA9A,B,C OA12A,C	128,794		17-0TS		ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	B	PAGE IS
2032 V-07	IA9A,B,C OA12A,C	128,794		17-OTS		ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	B- -	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2032 V-08	IA9A,B,C OA12A,C	128,794		17-0TS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	в-
2032 V-09	IA9A,B,C OA12A,C	128,794		17-OTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	B- ,
2032 V-10	IA9A,B,C OA12A,C	128,794		17-OTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	OF POOR
2032 V-11	IA9A.B.C OA12A.C	128,794		17-OTS ,	ARC 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	NAL PAGE IS OOR QUALITY
2032 V-12	IA9A,B,C OA12A,C	128,794		17-0TS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	B- ≪ Ø 3

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2032 V-13	IA9A.B,C OA12A,C	128,794		17-OTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	β-
2032 V-14	IA9A,B,C OA12A,C	128,794	•	17-0TS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	в- Оп -
2032 V-15	IA9A,B,C OA12A,C	128,794		17-OTS	ARC - 11-FOCT TRANSONIC WIND TUNNEL (UNI TARY) ~ 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	ORIGINAL PAGE-IS OF POOR QUALITY
2032 V-16	IA9A,B,C DA12A,C	128,794		17-OTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	в- र क
2032 V~17	IA9A,B,C GA12A,C	128,794		17-OTS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 707	B <i>-</i>

DMS DMS~DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2032 V-18	IA9A,B,C OA12A,C	128,794		17-0TS	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 707 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 707	8-
2039	IAGA	134,071		MODEL 2A ORBITER AND EXTERNAL TANK	MSFC - 14-INCH TRISONIC WIND TUNNEL - 571	85 9
2042	I A 52	134,087		MFSC MODEL NO 453	MSFC - 14-INCH TRISONIC WIND TUNNEL - 584	98 POOR
2048	IA12B	134,104		2A CONFIGURATION	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 710	? QUALITY
2062 V-01	IA13	134,117		INTEGRATED VEHICLE CONFIG 3 (MODEL 32-OTS)	AEDC - SUPERSONIC WIND TUNNEL (A) - VA323	т
2062 V-02	IV13	134,118		INTEGRATED VEHICLE CONFIG. 3 (MODE L 32-OTS)	AEDC - SUPERSONIĊ WIND TUNNEL (A) - VA323	τυ
2062 V-03	IA13	141,801		INTEGRATED VEHICLE CONFIG 3 (MODE L 32-OTS)	AEDC - SUPERSONIC WIND TUNNEL (A) - VA323	TJ
2063	IA37 IA48	128.788		INTEGRATED VEHICLE	MSFC - 14-INCH TRISONIC WIND TUNNEL - 579/580	88
2064 V-01	1436	141,814		INTEGRATED SSV 2A,3A MODIFIED	CALSPAN - 8-FOOT TRANSONIC WIND TUNNEL - T14-053	UF

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2064 V-02	IA36	141,816		INTEGRATED SSV 2A,3A MODIFIED	CALSPAN - 8-FOOT TRANSONIC WIND TUNNEL T14-O53	UF -	1
2065 V-01	IA12C	141,518		2A CONFIGURATION	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 710	BZ -	
2065 V-02	IA120	141,519		2A CONFIGURATION	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 710	BZ -	
2065 V-03	IA12C	141,520		2A CONFIGURATION	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 710	ВZ	OR OR
2070	LA23	128,787		JSC 040A ORBITER WITH EHOT AND 2 S RM	LARC - LOW-TURBULENCE PRESSURE TUNNEL 141	PU -	ORIGINAL OF POOR
2072	IA31FC	134,072	-	PRR BASELINE LAUNCH CONFIGURATION MCR 0074 BASELINE MODEL ELEMENTS	MSFC - 14-INCH TRISONIC WIND TUNNEL 573	90	PAGE IS
2077 V-01	IA29 DA63	134,095		140A/B ORB , VEH 4 ET, 2 SRB'S SHUTTLE ORBITER VENT PRESSURE MODE L 36-OTS	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL 630	EB -	N W
2077 V-02	IA29	134,099		140A/B ORB , VEH 4 ET, 2 SRB'S	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL 630	EB	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2077 V-03	0A63	134,100		140A/B ORB , VEH 4 ET, 2 SRB'S	ARC - 6-FOOT BY 6-FOOT SUPERSONIC WIND T UNNEL - 630	EB
2078	IA10	128,795		MODEL 32-OT WITH ORBITER, ET, SIMU LATED ENGINE PLUMES	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 169	, В7
2084 V-01	IA14A	134,443		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 716	B1
2084 V-02	IA14A	134,444		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 716	B1 <u>O</u> O
2084 V-03	IA14A	143,445	•	SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	ORIGINAL OF POOR
2084 V-04	IA14A	143,446		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	PAGE IS QUALITY
2084 V-05	IA14A	143,447		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	B1 < 55
2084 V-06	IA14A	143,448		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	B1

INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2084 V-07	IA14A	143,449		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	В1
2084 V-08	IA14A	143,450		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	B1
2084 V-09	IA14A	141,501	•	SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	B1
.2084 •V-10	IA14A	141,502		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) ~ 716	ORIGINAL OF POOR
2084 V-11	IA14A	141,503		SSV 140A/B LAUNCH	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 716	
2085	0H10 IH2	167,344		SPACE SHUTTLE INTEGRATED VEHICLE P RESSURE MODEL 26-OTS	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 171	PAGE IS QUALITY
2093	IA37B	134,090		EXTERNAL TANK, T9 EXTERNAL TANK, T11	MSFC - 14-INCH TRISONIC WIND TUNNEL - 585	93
2098	IH15	134,096		B10C5D7F4M3V5W87 B10C5D7F4M3V5W87T8	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 172	88
2099 V-01	OH4B	134,419		22-0T	AEDC - Hypersonic wind tunnel (B) - VA352	тк

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DMS DMS-DR-	NASA SERIES Number	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIP	CTER
2099 V-02	ОН4В	134,438		22-OT	AEDC - HYPERSONIC WIND TUNNEL (B) VA352	тк	
2099 V-03	ОН4В	134,439		22-01	AEDC - HYPERSONIC WIND TUNNEL (B) VA352	тк	
2100	OH3B OH3V	134,075		ORB.(VL70-000139)/ET (VL78-00041) AND ORB ALONE RI ORBITER (VL70-000139)	AEDC - HYPERSONIC WIND TUNNEL (B) VA289	TM -	
2105	IH17	144,594		ORBITER + EXTERNAL TANK, SSV MODEL 41-OTS EXTERNAL TANK ALONE, SSV MODEL 41- OTS	LARC - MACH 8 VARIABLE-DENSITY HYPERSONIC TUNNEL 646/647	PR	
2108	IA35 DA64	134,084	•	B26C9E26F8M7N25R5N116 B26C9E26F8M7N25R5N116S12T12	LARC - UNITARY PLAN WIND TUNNEL 1063	Q4	ORIGINAL OF POOR
2110	IH18	144,589		ORBITER CONFIGURATION 2A EXTERNAL TANK	LARC - FREON TUNNEL - 97-118	QM	
2112	1457	134,401		INTEGRATED VEHICLE (CONFIGURATION 3)	AEDC - SUPERSONIC WIND TUNNEL (A) - VA422	TL	PAGE IS QUALITY
2118	IA41	134, 108		MATED INTEGRATED VEHICLE MODEL(67- OTS)	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL '- 667	Q8	
2119	IA42A IA42B	134,109		CONFIGURATION 4 MATED SSV (67-0TS)	LARC - UNITARY PLAN WIND TUNNEL - 1056/1073	Q6	
2122	IA69	134,424		LAUNCH CONFIGURATION (MODEL 67-OTS	NRLAD - 7-FOOT TRISONIC WIND TUNNEL - 280	FЗ	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2123	I A53	141,504		LAUNCH CONFIGURATION LAUNCH CONFIGURATION WITH STRUTS	MSFC - 14-INCH TRISONIC WIND TUNNEL - 588	96
2129 V-01	IA14B	141,522		SSV 140A/B LAUNCH	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 716	В3
2129 V-02	IA14B	141,523	•	SSV 140A/B LAUNCH	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 716	В3
2136 V-01	IH3	141,514		B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 178	OF POOR
2136 V-02	IH3	141,515		B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 178	
2136 V-03	IH3	141,516		B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 178	PAGE IS QUALITY
2136 V~04	IH3	141.517		B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC " 3 5-FOOT HYPERSONIC WIND TUNNEL - 178	EI
2137 V-01, R-01	IAGO	134, 103		CONFIGURATION 3, MODEL 32-0)	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL - 108	H1
2138 V-01	IH4	144,608		O O10-SCALE VERSION OF THE VEHICLE 3 SPACE SHUTTLE CONFIGURATION	LARC - UNITARY PLAN WIND TUNNEL - 1059	QЗ

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	, CONFIGURATION	TEST NUMBER	DATASET 2-CHARA DESCRIF	ACTER
2138 V-02	IH4	144,609		O 010-SCALE VERSION OF THE VEHICLE 3 SPACE SHUTTLE CONFIGURATION	LARC - UNITARY PLAN WIND TUNNEL 1059	Q3 -	
2138 V-03	IH4	144,610		O O10-SCALE VERSION OF THE VEHICLE 3 SPACE SHUTTLE CONFIGURATION	LARC - UNITARY PLAN WIND TUNNEL 1059	- 03	
2138 V-04	IH4	144,611		O.010-SCALE VERSION OF THE VEHICLE 3 SPACE SHUTTLE CONFIGURATION	LARC - UNITARY PLAN WIND TUNNEL 1059	Q3 -	
2143	IAG1A	144,587		INTEGRATED VEHICLE- CONFIGURATION 3 LINES	AEDC - SUPERSONIC WIND TUNNEL (A) VA422	TQ	우 있
2144	1468	134,427		LAUNCH CONFIGURATION	NRLAD - 7-FOOT TRISONIC WIND TUNNEL 281	F4	ORIGINAL OF POOR
2146	154	134,092	•	30-015	LARC - 26-INCH TRANSONIC BLOWDOWN TUNNEL 547	HF	PAGE IS QUALITY
2148 V-01	IH20	134,440		22-0TS	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 185	EN -	7 S
2148 V-02	IH20	134,441		22-OTS	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 185	EN -	
2153	IH\$	151,377		ORBITER ALONE	LARC - UNITARY PLAN WIND TUNNEL 1071	Q7 -	
2156 V-01	IA17A	141,797		ORBITER WITH ET SEPARATING ISOLATED ORBITER	AEDC - HYPERSONIC WIND TUNNEL (B) VA422	TR	

DMS DMS-DR-	NASA / SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACT DESCRIPTO	
2156 V-02	IA17A	141,798		ORBITER WITH ET SEPARATING ISOLATED ORBITER	AEDC HYPERSONIC WIND TUNNEL (B) VA422	TR -	
2156 V-03	IA17A	141,799		ORBITER WITH ET SEPARATING ISOLATED ORBITER	AEDC - Hypersonic wind tunnel (B) VA422	TR	
2157	IH19	141,822		ORBITER EXTERNAL TANK	LARC - HYPERSONIC NITROGEN TUNNEL 28	QE -	
2158	IS6A	147,640		013, T9, S7	MSFC - 14-INCH TRISONIC WIND TUNNEL 582	1B -	ORIO OF
2160	IA18	134,413		52-OT ET ALONE	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL 191	ES -	ORIGINAL OF POOR
2164 V-01	0H12 IH21	141,828		MODEL 37-OT (CONFIG 3 ORB AND ET) CONFIGURATION 3 ORBITER	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 173-100	ug -	PAGE IS
2164 V-02	0H12 IH21	141,829		MODEL 37-OT (CONFIG 3 ORB AND ET) CONFIGURATION 3 ORBITER	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 173-100	UG -	7 6
2164 V-03	OH12 IH21	141,830		MODEL 37-OT (CONFIG 3 ORB AND ET) CONFIGURATION 3 ORBITER	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 173-100	ug -	
2166	IH16	141,534		ORB +ET+SRB ET	LARC - Unitary plan wind tunnel 1041	PQ -	
2168	LA32		71945	THERMAL PROTECTION SYSTEM	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 97	QO -	

INDEX OF PUBLISHED DATA INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2169 V-01	14814	141,836		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	ET
2169 V-02	IA81A	141,837		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	ЕТ
2169 V-03	IA81A	141,838	4	LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	ET O O
2169 V-04	IA81A	141,839		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	ORIGINAL OF POOR
2169 V-05	IA81A	141,840	•	LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	PAGE IS QUALITY
2169 V-06	IA81A	141,841		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	ET Z
2169 V-07	IA81A	141,842		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 019	ET
2170 V-01	IA19 `	141,543		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 014	EU

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	!
2170 V-02	1419	141,544		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 014	EU	
2170 V-03	IA19	141,545		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 014	EU	
2173	IA8	134,107		6-OTS	ARC - 14-FOOT TRANSONIC WIND TUNNEL - 711	вк	ORIGINAL OF POOR
2174 V-01	EEAI	141,811		VEHICLE 5 CONFIGURATION	MSFC - 14-INCH TRISONIC WIND TUNNEL - 594	10	
2174 V-02	EEAI	141,812		VEHICLE 5 CONFIGURATION	MSFC - 14-INCH TRISONIC WIND TUNNEL - 594	10	PAGE IS
2174 V-03	IA33	141,813		VEHICLE 5 CONFIGURATION	MSFC - 14-INCH TRISONIC WIND TUNNEL - 594	10	
2175 V-01	1A70	134,431		MODEL 49-0 + 67TS INTEGRATED VEHIC LE	NRLAD - 7-FOOT TRISONIC WIND TUNNEL - 282	F7	·
2175 V-02	1A70	134,432		MODEL 49-0 + 67TS INTEGRATED VEHIC LE	NRLAD - 7-FOOT TRISONIC WIND TUNNEL - 282	F7	
2175 V-03	1A70	134,433		MODEL 49-0 + 67TS INTEGRATED VEHIC LE	NRLAD - 7-FOOT TRISONIC WIND TUNNEL - 282	F7	

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INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X Number	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2180 V-01	1H28	147,615		SSV ORBITER (MODEL(50-0) SSV EXT. TANK (MODEL 41-T)	ARC ~ 3 5-FOOT HYPERSONIC WIND TUNNEL - 195	EV
2180 V-02	IH28	147,616		SSV ORBITER (MODEL(50-0) SSV EXT TANK (MODEL 41-T)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 195	EV
2189	IA110	141,506		ORBITER 140A/B	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 052	E 1
2192 V-01	IA87	141,541		O/ET; O/ET,SRB, SRB	AEDC - SUPERSONIC WIND TUNNEL (A) - 60A	TU
2192 V-02	IA87	141,542		O/ET, O/ET,SRB; SRB	AEDC - SUPERSONIC WIND TUNNEL (A) - 60A	τu
2194 V-01	IA81B	141,817		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 019	ET
2194 V-02	IA81B	141,818		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 019	ET
2194 V-03	IA81B	141,819		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 019	ЕТ
2194 V-04	IA81B	141,820		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 019	ET

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
2194 V-05	IA81B	141,821		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 019	ЕТ	
2199	LA43A/B LA43B		3315	ORBITER, ET, SRB	LARC - UNITARY PLAN WIND TUNNEL - 1074 1093	H5	
2200	LA44		3336	ORBITER-140A/B, SRB, ET;	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 677	H6	
2204	1A43	141,525		OTS,140A/B	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 693	HC	유용
2206	IA44	141,528		O 010-SCALF DUTER MOLD LINE MODEL OF THE 140A/B CONFIGURATION	LARC - UNITARY PLAN WIND TUNNEL - 1088/1119	НВ	ORIGINAL OF POOR
2210	IH27	151,372		15-0 VIII (FLAT-PLATE CARRIER)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 200	E3	PAGE IS
2212 V-01	IA80	147,632		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 023	E4	T S
2212 V-02	OBAI	147,633		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 023	E4	
2212 V-03	IABO	147,634		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 023	E4	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2212 V-04	OBAI	147,635		LAUNCH VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 023	E4
2219 V~01	IA82C -	144,597		LAUNCH VEHICLE 5	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - O44	E5
2219 V-02	IA82C	144,598		LAUNCH VEHICLE 5	ARC - 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 044	E5
2224	LA56	147,650		72-OTS (ORB , ET, SRM)	LARC - NASA LANGLEY RESEARCH CENTER - 699 8-FOOT TRANSONIC PRESSURE TUNNEL -	
2226	IA61B	141,507	•	SPACE SHUTTLE VEHICLE CONFIGURATION 3 MODEL 32-OTS SPACE SHUTTLE ORBITER MODEL 52-O	AEDC - SUPERSONIC WIND TUNNEL (A) - VA422 21AA	ORIGINAL OF POOR
2227	IA71	141,806		ORB./W/ET AND SRB 740TS, ORB W/ET AND SRB'S 770, 74TS	MSFC - 14-INCH TRISONIC WIND TUNNEL - 610	R QUA
2230	IA17B	141,509		ORBITER-TANK MATED, MODEL 52-OT	AEDC - HYPERSONIC WIND TUNNEL (B) - VA422	PAGE IS QUALITY
2231 V-01	IA82B	144,601		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 044	E6

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTE DESCRIPTOR	
2231 V-02	I A 8 2 B	144,502		LAUNCH VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 044	E 6	
2235	SA3OF	141,810		SRB W/O HEAT SHIELD, W/HEAT SHIELD ON SKIRT, W/HEAT SHIELD ON NOZZLE	MSFC - 14-INCH TRISONIC WIND TUNNEL - 611	10	
2240	IH41A	151,054	•	60-OTS THERMOCOUPLE MODEL	AEDC - SUPERSONIC WIND TUNNEL (A) - A4A	V7	
2242 V-01	IA111	141,831		52-OTS	AEDC - SUPERSONIC WIND TUNNEL (A) - A3A -	V8	ORIGINAL OF POOR
2242 V-02	IA111	144,588		52-OTS	AEDC - SUPERSONIC WIND TUNNEL (A) - A3A -	V8	
2248	IH48	144,599		GO OTS SPACE SHUTTLE VEHICLE 5	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 211	NB	PAGE IS
2249	ІНЗЗ	151,775		37-OT SPACE SHUTTLE ORBITER/EXTERN AL TANK- O1 SCALE	CALSPAN - ' 48-INCH HYPERSONIC SHOCK TUNNEL - 185-131 96-INCH'HYPERSONIC SHOCK TUNNEL -	ทก	700
2253	IA125	144,833		77-0, 77-0TS	MSFC - 14-INCH TRISONIC WIND TUNNEL - 622	1N	
2255		•	62,444	SERIES-BURN, PARALLEL-BURN, 2 CANO PY CONFIGURATIONS;	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	NF ,	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2258 V-01	IA72	151,045		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	NE
2258 V-02	IA72	151,046		88-OTS MODIFIED W/DMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	NE .
2258 V-03	IA72	151,047		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 072	NE
2258 V-04	IA72	151,048		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	ORIGINAL OF POOR
2258 V-05	IA72	151,049	•	88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	PAGE IS
2258 V-06	IA72	151,050		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	NE 7 00
2258 V-07	IA72	151,051		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	NE
2258 V-08	IA72	151,052		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	NE

INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	?
2258 V-09	IA72	151,053		88-OTS MODIFIED W/OMS PODS AND COL D AIR MPS AND SRB PLUME SIMULATION	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 072	NE	
2272 V-01	IA114	151,077		SSV 3	AEDC - HYPERSONIC WIND TUNNEL (B) - C4A	VC	
2272 V-02	IA114	151,078		SSV 3	AEDC - HYPERSONIC WIND TUNNEL (B) - C4A	VC	유
2274	FA14	144,593		74-DTS, VEH. 5 (ASCENT CONFIG)	MSFC - 14-INCH TRISONIC WIND TUNNEL - 600	1L	ORIGINAL OF POOR
2282	IH34	151,407		PLUME SIMULATION MODEL 19-DTS	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 038	GF	PAGE IS
2284 V-01	IS2A/B	151,035		INTEGRATED SPACE SHUTTLE VEHICLE 84-OTS	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 113 11-FOOT TRANSONIC WIND TUNNEL (UNI	NK	~ <i>(</i> 2)
2284 V-02	IS2A/B	151,036		INTEGRATED SPACE SHUTTLE VEHICLE 84-OTS	TARY) ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 113 11-FOOT TRANSONIC WIND TUNNEL (UNI	NK	·
2293	1440	151,381		MDDEL 75-OTS (72-D WING, 140C MOD FUSELAGE, ET, SRB)	TARY) AEDC - SUPERSONIC WIND TUNNEL (A) - K1A	νт	

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DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACT DESCRIPTO	
2295 V-01	IH4 1B	151,069		ET ALONE T34 ORBITER ALONE B62C12E52F10M16R18V 8W116	AEDC - SUPERSONIC WIND TUNNEL (A) - A4A	VF	
2295 V-02	IH41B	151,070		ET ALONE T34 ORBITER ALONE B62C12E52F10M16R18V 8W116	AEDC - SUPERSONIC WIND TUNNEL (A) - A4A	. VF	
2295 V-03	IH4 1B	151,071		ET ALONE T34 ORBITER ALONE B62C12E52F10M16R18V 8W116	AEDC - SUPERSONIC WIND TUNNEL (A) - A4A	VF	
2295 V-04	IH41B	151,072		ET ALONE T34 ORBITER ALONE 862C12E52F10M16R18V 8W116	AEDC - SUPERSONIC WIND TUNNEL (A) - A4A	VF	
2295 V-05	IH41B	151,073		ET ALONE T34 ORBITER ALONE B62C12E52F10M16R18V 8W116	AEDC - SUPERSONIC WIND TUNNEL (A) - A4A	. VF	ORIGINAL OF POOR
2299	LASO		3497'	ORBITER/747 FERRY VEHICLE	LARC - HIGH SPEED 7 BY 10-FOOT TUNNEL - 999	NU	
2306 V-01	IA135A/B/C	167,354		O - B26C9E44F9M16R5V8W116 T - AT28AT29AT3OAT31AT32AT128FL10F L11FR10PT22PT23PT24PT25PT26PT27T37	ARC 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL 144-1	NQ	PAGE IS QUALITY
2306 V-02	IA135A/B/C	167,355		O - B26C9E44F9M16R5V8W116 T - AT28AT29AT3OAT31AT32AT128FL10F L11FR10PT22PT23PT24PT25PT26PT27T37	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL - 144-1	NQ	
2306 V-03	IA135A/B/C	167,356		O - B26C9E44F9M16R5V8W116 T - AT28AT29AT3OAT31AT32AT128FL10F L11FR10PT22PT23PT24PT25PT26PT27T37	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL - 144-1	NQ	

INDEX OF PUBLISHED DATA INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR Number	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	र
2308	IH5	147,636		19-0TS	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 181	υL -	
2312 V-01	IH47	151,075		VEHICLE 5, TO INCLUDE SRB ALONE AN D OTS (SPIKE NOSE ET)	AEDC - SUPERSONIC WIND TUNNEL (A) U3A	- VI	
2312 V-02	IH47	151,076		VEHICLE 5, TO INCLUDE SRB ALONE AN D DTS (SPIKE NOSE ET)	AEDC - SUPERSONIC WIND TUNNEL (A) J3A	- VI	
2315	IA141	147,623	·	O.010-SCALE VL70-000140C INTEGRATE D SPACE SHUTTLE LAUNCH VEHICLE	NRLAD - 7-FOOT TRISONIC WIND TUNNEL 297	FK -	ç
2316	IA137	147,622		FULL 331 INCH DIAMETER FOREBODY AN 80% (264 8 INCH) OF FULL DIAMET ER FOREBODY	ARC - 14-FOOT TRANSONIC WIND TUNNEL 143-1	NY -	ָּרֶטְטָרָ ביים ביים
2319	IH43	151,771		O1-SCALE SPACE SHUTTLE ORB/ET 59- OT	CALSPAN - 48-INCH HYPERSONIC SHOCK TUNNEL 189 96-INCH HYPERSONIC SHOCK TUNNEL	- -	(QUAL
2323	IA94A	151,039		O 010-SCALE 72-OTS MODEL	LARC - UNITARY PLAN WIND TUNNEL 1152	JK -	
2324	IA94B	151,040		O.010-SCALE 72-OTS MODEL	LARC - UNITARY PLAN WIND TUNNEL 1177	JW -	
2326 V-01	EGAI	151,037		O.010-SCALE 72-OTS MODEL	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 749	ქქ -	
2326 V-02	1493	151,038		O 010-SCALE 72-DTS MODEL	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL 749	- JJ	

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER		DATASET 2-CHÁRACTE DESCRIPTOR	
2327 V-01	IA22 ^	151,079		CONFIG. 102 ORBITER AND ET, DESIGN ATED MODEL 70-OT	AEDC - HYPERSONIC WIND TUNNEL (B) D9A	-	VK	
2327 V-02	I A22	151,080		CONFIG 102 ORBITER AND ET, DESIGN ATED MODEL 70-OT	AEDC - HYPERSONIC WIND TUNNEL (B) D9A	-	VK	
2327 V-03	1A22	151,081		CONFIG. 102 ORBITER AND ET, DESIGN ATED MODEL 70-OT	AEDC - HYPERSONIC WIND TUNNEL (B) D9A	-	VK	
2328	LA34 TND-8233			REUSABLE SURFACE INSULATION TILE G APS	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 105	-	QQ	-
2335	IA140A/B	151,783		VEHICLE 5 MODEL 74-OTS	MSFC - 14-INCH TRISONIC WIND TUNNEL 641 646	-	10	ORIGINAL OF POOR
2346 V-01	IA142	151,385	,	75-OTS	AEDC - SUPERSONIC WIND TUNNEL (A) K1A	-	VQ	
2346 V-02	IA142	151,386		75-0TS	AEDC - SUPERSONIC WIND TUNNEL (A) K1A	-	VQ	PAGE IS
2346 V-03	IA142	151,387		75-OTS	AEDC - SUPERSONIC WIND TUNNEL (A) K1A	-	VQ	~ <i>(</i>)
2354 V-01	IA143	151,401	1	MODEL 75-OTS (WING)	AEDC - SUPERSONIC WIND TUNNEL (A) P8A	-	vx	
2354 V-02	IA143	151,402	2	MODEL 75-OTS (WING)	AEDC - SUPERSONIC WIND TUNNEL (A) P8A	-	vx	

INDEX OF PUBLISHED DATA

	DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONF I GURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR	
	2354 V-03	IA143	151,403	3	MODEL 75-OTS (WING)	AEDC - SUPERSONIC WIND TUNNEL (A) - P8A	VX	
	2354 V-04	IA143	151,404	4	MODEL 75-OTS (WING)	AEDC - SUPERSONIC WIND TUNNEL (A) - PBA	vx	
\mathcal{L}	2357	IH68	167,655		INTEGRATED VEHICLE ORBITER PLUS TANK	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 222	2D	
Y	2372	IH72	160,843	•	OTS TANK ALONE	AEDC - SUPERSONIC WIND TUNNEL (A) - V41A-R2A	VZ	ORIGINAL OF POOR
	2377 V-01	IA144	167,342		O - 14OA/B/C/R SRB - MODIFIED VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 228-1		IAL PAGE
	2377 V-02	1A144	167,343		D - 140A/B/C/R SRB - MODIFIED VEHICLE 5	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 228-1	2N	PAGE IS
	2378	IA191	160.820		MODEL 112-T	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 412-1	AA	
	2384 V-01	IA148	151,412		OV102 + ET (MODEL 70-0T)	AEDC - HYPERSONIC WIND TUNNEL (B) - TOA	4D	
	2384 V-02	IA148	151,413		OV102 + ET (MODEL 70-OT)	AEDC - HYPERSONIC WIND TUNNEL (B) - TOA	4D ,	

INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2391	1A244	167,346		OTS - SINGLE STING IN ORBITER OTS - ET AND SRB ON SEPERATE STING	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 779	KE
2397	LA113	167,347		O -140A/B/C/R T -MODIFIED VEHICLE 5	LARC - 8-FOOT TRANSONIC PRESSURE TUNNEL - 780	КН
2398 V-01	IA 105A	160,850		B62C9E64W131M16N28N112R5V8FD3F9 T39	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 470	4B
2398 V-02	I A 105A	160,851		B62C9E64W131M16N2BN112R5V8FD3F9 T39	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 470	4B Ö <u>O</u>
2398 V-03	IA 105A	160,852	•	B62C9E64W131M16N28N112R5V8FD3F9 T39	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 470	ORIGINAL OF POOR
2401	IS1A/B/C OS3	151,395		11-OTS (ORB, ET, 2 SRB'S)	ARC - 11-FOOT, 9-FOOT, 8-FOOT, UNITARY W IND TUNNEL - 705-1	PAGE IS QUALITY
2403 V-01	IA 156A	160,515		B75C16E64F16FR22HG1M52N108N109N110 N111R20U1V27V29VT10VT11VT14VT17W13 1T39S27	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 470	ન્દ્રે ઉ વે 4C
2403 V-02	IA156A	160,516		B75C16E64F16FR22HG1M52N108N109N110 N111R20U1V27V29VT10VT11VT14VT17W13 1T39S27	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) -	4C

470

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2403 V-03	IA156A	160,517		B75C16E64F16FR22HG1M52N108N109N110 N111R20U1V27V29VT10VT11VT14VT17W13 1T39S27	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 470	4C
2404 V-01	PILAI	160,510		88-DTS- 02 SCALE OF THE INTEGRATED SPACE SHUTTLE VEHICLE	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 275-1	2R
2404 V-02	P1141	160,511	•	88-OTS- 02 SCALE OF THE INTEGRATED SPACE SHUTTLE VEHICLE	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) - 275-1	2R 9 9
2404 V-03	er Pat	160,512		88-DTS- 02 SCALE OF THE INTEGRATED SPACE SHUTTLE VEHICLE	ARC - 11/FOOT TRANSONIC WIND TUNNEL (UNI TARY) 275-1	OF POOR
2404 V-04	1A119	160,513		88-DTS- 02 SCALE OF THE INTEGRATED SPACE SHUTTLE VEHICLE.	ARC - 11-FOOT TRANSONIC WIND TUNNEL (UNI TARY) 275-1	2R QUALITY
2406	IA181	167,348		B62,C12,E62,F10,M16,N28,R5,V8,W127 AT16,AT17,AT18,FL5,FL6,FL9,FR6,PT1 3,PT14,PT20,T20	MSFC - 14-INCH TRISONIC WIND TUNNEL - 649	iu - G
2407	IH73	167,374		B22C7F5M4V7W111 T8	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 233-1	2V
2408 V-01	IA156B	160,498		B75C16E64F16FR22HG1M52N108N109N110 N111R2OU1V27V29VT10VT11VT14VT17W13 1T39S27	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 272	2Т

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2408 V-02	IA156B	160,499		B75C16E64F16FR22HG1M52N108N109N110 N111R20U1V27V29VT10VT11VT14VT17W13 1T39S27	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 272	2 T
2408 V-03	IA156B	160,500		B75C16E64F16FR22HG1M52N108N109N110 N111R2OU1V27V29VT10VT11VT14VT17W13 1T39S27	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 272	2т .
2412 V-01	IH90	167,386		60-DTS (B62C12E52F10M16R18V8W116T 38S26)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 234-1	2₩ Q Q
2412 V-02	IH90	167,387		60-DTS (B62C12E52F10M16R18V8W116T 38S26)	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL -	ORIGINAL OF POOR
2413 V-01	IA 105B	160,858	,	B62C9E64W131M16N28R5V8FD3F9 T39S27	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 242-1	R QUALITY
2413 V-02	I A 105B	160,859		862C9E64W131M16N28R5V8FD3F9 T39S27	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 242-1	2U T 56
2416	14603	160,824		LBM SSLV ·	MSFC - TRISONIC WIND TUNNEL - 668	6C
2418	IH100	151,414		WEDGE SHAPED MODEL TO HOLD DFI GAS TEMP, PROBE	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 227	3Z -
2422	FH15	151,767		30/10/40-DEGREE CONE OGIVE	AEDC - SUPERSONIC WIND TUNNEL (A) V41A-20	4K

INTEGRATED VEHICLE DATA

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2428 V-01	IH11	160,523		84-OTS035 SCALE MODEL OF THE IN TEGRATED SPACE SHUTTLE VEHICLE	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 045	GI
2428 V-02	IH11	160,524		84-0TS- 035 SCALE MODEL OF THE IN TEGRATED SPACE SHUTTLE VEHICLE	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 045	GI
2428 V-03	IH11	160,525	•	84-OTS- 035 SCALE MODEL OF THE IN TEGRATED SPACE SHUTTLE VEHICLE	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 045	GI
2428 V-04	IH1†	160,526		84-OTS035 SCALE MODEL OF THE IN TEGRATED SPACE SHUTTLE VEHICLE	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 045	GI
2429	IH51B	167,353		OT FLAT PLATE 580TS	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 239	3C
2431 V-01	IH85	151,793		OTS-T38\$26B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) - V41A-W5	4L
2431 V-02	1H85	151,794		OTS-T38\$26B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) - V41A-W5	4L
2431 V-03	IH85	151,795		OTS-T38526B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) - V41A-W5	4L
2431 V-04	IH85	151,796		OTS-T38S26B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) - V41A-W5	4L

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INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2431 V-05	1H85	151,797		DTS-T38S26B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) V41A-W5	4L.
2431 V-06	IH85	151,798		OTS-T38S26B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) V41A-W5	4L
2431 V-07	IH85	151,799		OTS-T38526B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) V41A-W5	4L -
2431 V-08	IH85	151,800		OTS-T38S26B62C12M16W116E52V8R18F10 OT-T38B62C12M16W116E52V8R18F10	AEDC - SUPERSONIC WIND TUNNEL (A) V41A-W5	4L - 약
2435	1H39	151,415		INTEGRATED VEHICLE CONFIGURATION 5	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL 041	GK C
2437	FA25	151,766		MODEL 74-OTS MODEL 74-OTS WITH ORB MOLD LINE C HANGES ON WING AND NOSE	MSFC - 14-INCH TRISONIC WIND TUNNEL 652	1X (
2438 V-01	BEPAI	160,855		PROPOSED VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 246-1	3D
2438 V-02	8E†AI	160,856		PROPOSED VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 246-1	30
2438 V-03	18138	160,857		PROPOSED VEHICLE 5	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 246-1	3D

INDEX OF PUBLISHED DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2440	1H83	151,765		SPACE SHUTTLE PLUME SIMULATION (MO DEL 19-OTS)	LERC - 10 BY 10-FOOT SUPERSONIC WIND TUNN EL - 044	GZ
2444 V-01	ESPAI	160,488		B75C16E64F16FR22HG1M52N108N109N110 N111R20U1V27VT10VT11VT12VT13VT14 VT15VT16VT17W131T39S27	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 519	4Q
2444 V-02	E81AI	160,489		B75C16E64F16FR22HG1M52N108N109N110 N111R20U1V27VT10VT11VT12VT13VT14 VT15VT16VT17W131T39S27	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 519	ORIGINAL OF POOR
2448 V-01	IH51C	160,519			ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 241	
2448 V-02	IH51C	160,520			ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 241	PAGE IS QUALITY
2449	IA132	160,497		EXTENAL OXYGEN HYDROGEN TANK FOREB ODY MODEL	AEDC - TRANSONIC PROPULSION WIND TUNNEL (PWT-16T) - 505	4R
2452	IH99	167,383		SSV SRB NOSE	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 230	2 P
2453	IH75	151,776		19-0TS-864,C16,E63,F14,M18,N92,N94 ,V23,W129,S22,N106,T33	CALSPAN - LUDWIEG TUBE - 195-100	UQ
2456 V-01	IA184	160,486		0 03-SCALE SHUTTLE INTEGRATED VEHI CLE 47-DTS	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 347-1	зк

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2456 V-02	IA184	160,487		O.03-SCALE SHUTTLE INTEGRATED VEHI CLE 47-0TS	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 347-1	зк
2457	IA180	160,813		EXTERNAL OXYGEN HYDROGEN TANK FORE BODY MODEL	LARC - UNITARY PLAN WIND TUNNEL - 1267	kv .
2462 V-01	IA131B/C	167,370		ET FOREBODY (T41)- LOUVERS OPEN, C T FAIRING AND GO2 LINE INSTALLED ET FOREBODY (T41)- LOUVERS OPEN, C T,FAIRING, AND GO2 LINE REMOVED	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) - 283-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) -	3E Q.Q.
2462 V-02	IA131B/C	167,371		ET FOREBODY (T41)- LOUVERS OPEN, C T FAIRING AND GO2 LINE INSTALLED ET FOREBODY (T41)- LOUVERS OPEN, C T,FAIRING, AND GO2 LINE REMOVED	ARC - 9-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY) 283-1 8-FOOT BY 7-FOOT SUPERSONIC WIND T UNNEL (UNITARY)	ORIGINAL PA
2464 V-06	IH102	160,833		B60C10 (83-0)	AEDC - SUPERSONIC WIND TUNNEL (A) - V41A-67	PAGE IS QUALITY
2467	IH103	160,834		60-0T 56-0/60T	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 245	ЗР
247 t	LA132	160,514		LAUNCH VEHICLE - 890TS	LARC - 16-FOOT TRANSONIC TUNNEL - 341	ĸw
2474	FA28	160.826		ORBITER ALONE LAUNCH CONFIGURATION (NO PROTUBERA NCES ON ET)	MSFC - 14-INCH TRISONIC WIND TUNNEL - 656	1Z

INTEGRATED VEHICLE DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA NASA CR TM-: NUMBER NUMB		TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2475	LA140	160,509	LAUNCH VEHICLE (89-0TS)	LARC - 16-FOOT TRANSONIC TUNNEL 342	- KY
2481	I A 6 0 2	167,377	OTS (MODEL 74) OTS + LBM	MSFC - 14-INCH TRISONIC WIND TUNNEL 665	6B -

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CARRIER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2201	CA3	160,854		BOEING 747 CARRIER (MODEL TE 1065)	UW - LOW SPEED WIND TUNNEL 1136	GL -
2211 V-01	CA5	141,800		O.O3-SCALE AX 1319 I-1 (CARRIER) M ODEL	TBCA - Transonic wind tunnel 1431	GM -
2211 V-02	CA5	141,803		O 03-SCALE AX 1319 I-1 (CARRIER) M ODEL	TBCA - TRANSONIC WIND TUNNEL 1431	GM -
2211 V-03	CA5	141,804		O 03-SCALE AX-1319 I-1(CARRIER) MO DEL	TBCA - TRANSONIC WIND TUNNEL 1431	GM -
2217 V-01	CA2O	141,844		O.O3-SCALE 45-O MODIFIED SSV ORBIT ER 140A/B	TBCA - TRANSONIC WIND TUNNEL 1431	GN -
2217 V-02	CA2O	141,845	•	O.O3-SCALE 45-O MODIFIED SSV ORBIT ER 140A/B	TBCA - TRANSONIC WIND TUNNEL 1431	GN
2217 V-03	CA2O	141,846		O 03-SCALE 45-0 MODIFIED SSV ORBIT ER 140A/B	TBCA - TRANSONIC WIND TUNNEL 1431	GN -
2236	CA11	141,835		BOEING 747 MATED WITH AN EXTERNAL TANK	UW - LOW SPEED WIND TUNNEL 1146	 GO
2243	CA23A	144,583		MODEL 48-0/AX1318I-1 0.0125 SCALE	ARC - 14-FOOT TRANSONIC WIND TUNNEL 080	E9 -
2262 V-01	CA6	147,630		CARRIER W/ DRB. ALONE, CARRIER ALO NE, MATED 747/ORBITER	TBCA - TRANSONIC WIND TUNNEL 1472	GP -

INDEX OF PUBLISHED DATA CARRIER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARAC DESCRIPT	
2262 V-02	CA6	147,631		CARRIER W/ ORB. ALONE, CARRIER ALO NE, MATED 747/ORBITER	TBCA - TRANSONIC WIND TUNNEL 1472	GP ~	
2268 V-01	CA9 CA9P	151,396		BOEING AX1319P-1 CARRIER	TBCA - Transonic wind tunnel 1477	GQ -	
2268 V-02	CA9 CA9P	151,397		BOEING AX1319P-1 CARRIER	TBCA - Transonic wind tunnel 1477	GQ -	
2268 V-03	CA9P	151,398	•	BOEING AX1319P-1 CARRIER	TBCA - TRANSONIC WIND TUNNEL 1477	GQ.	
2268 V-04	CA9 CA9P	151,399		BOEING AX1319P-1 CARRIER	TBCA - TRANSONIC WIND TUNNEL 1477	GQ -	,
2268 V-05	CA9 CA9P	151,400		BOEING AX1319P-1 CARRIER	TBCA - TRANSONIC WIND TUNNEL 1477	GQ -	
2273 V-01	CA26	144,612		AX1318I-1, 747/1, 747/4	LTV - HIGH SPEED WIND TUNNEL 559	FE .	
2273 V-02	CA26	144,613		AX1318I-1, 747/1, 747/4	LTV - HIGH SPEED WIND TUNNEL 559	FE.	
2273 V-03	CA26	144,614		AX1318I-1, 747/1, 747/4	LTV - HIGH SPEED WIND TUNNEL 559	FE	
2273 V-04	CA26	144,615	•	AX1318I-1, 747/1, 747/4	LTV - HIGH SPEED WIND TUNNEL - 559	FE	

CARRIER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2273 V-05	CA26	144,616		AX1318I-1, 747/1, 747/4	LTV - HIGH SPEED WIND TUNNEL - 559	FE
2275 V-01	CA23B	144,603		O 0125-SCALE SSV ORBITER	ARC - 14-FOOT TRANSONIC WIND TUNNEL - 120	NH
2275 V-02	CA23B	144,604		O 0125-SCALE SSV ORBITER	ARC - 14-FOOT TRANSONIC WIND TUNNEL - 120	NH
2290 V-01	CA8	147,641		747/ORBITER-FERRY CONFIGURATION, 7 47/ORBITER-ALT CONFIGURATIONS	LARC - V/STOL TRANSITION RESEARCH WIND TU NNEL - 129	JF
2290 V-02	CAB	147,642		747/ORBITER-FERRY CONFIGURATION, 7 47/ORBITER-ALT CONFIGURATIONS	LARC - V/STOL TRANSITION RESEARCH WIND TU NNEL 129	original of Poor
2290 V-03	CA8	147,643	•	747/ORBITER-FERRY CONFIGURATION, 7 47/ORBITER-ALT CONFIGURATIONS	LARC - V/STOL TRANSITION RESEARCH WIND TU NNEL 129	QUALITY
2307 V-01	CA 14A	160,840		BOEING 747 CAM W/TYPE II MODIFICAT ION (MODEL TR-1007)	TBCA - TRANSONIC WIND TUNNEL - 1496 1497	GR ⋜॔ Ø
2307 V-02	CA14A	160,841		BOEING 747 CAM W/TYPE II MODIFICAT ION (MODEL TR-1007)	TBCA - TRANSONIC WIND TUNNEL - 1496 1497	GR
2332	CA 13	151,373		ORBITER- TAILCONE OFF, TAILCONE ON -TC19,	ARC - 14-FOOT TRANSONIC WIND TUNNEL - 121	NZ

95

INDER OF PUBLISHED DATA

CARRIER DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
2338	CS3	147,639		AX1322D-3,ORBITER MODEL 8-0	UW - LOW SPEED WIND TUNNEL - 1170	GU
2341	C\$4/5	147,638		747CAM/ORBITER	TBCA - TRANSONIC WIND TUNNEL - 1490/1493	GV
2347 V-01	CA 15A	160,482		04 SCALE 747-100	UW - LOW SPEED WIND TUNNEL - 1173	GS
2348 V-01	CA 15B	160,483		747-100 ALONE	UW - LOW SPEED WIND TUNNEL - 1178	GТ
2349	CA 17	151,379		CARRIER B29BW45N5857M2526T14Q12AT 115 1106.1V9 1 3FTS1	UW - LOW SPEED WIND TUNNEL 1184	gw 🗣 🤶

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INDEX OF PUBLISHED DATA

EXTERNAL TANK DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	;	DATASET 2-CHARACT DESCRIPTO	
2085	0H10 IH2	167,344			ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 171	-	B9	
2133	IA58	134,110		EXTERNAL TANK	LARC - CONTINUOUS-FLOW HYPERSONIC TUNNEL 107	-	QK	
2136 V-01	IH3	141,514		B17 C7 M4 F5 W103 E22 V7 R5	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 178	-	EI	
2136 V-02	IH3	141,515		B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 178	-	EI	유었
2136 V-03	IH3	141,516		B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 178	-	EI	ORIGINAL OF POOR
2136 V-04	IH3	141,517	•	B17 C7 M4 F5 W103 E22 V7 R5 T10	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 178	-	EI	PAGE IS
2145	TA1F	134,420		EXTERNAL TANK WITH PROTUBERANCES EXTERNAL TANK WITHOUT PROTUBERANCE S	MSFC - 14-INCH TRISONIC WIND TUNNEL 583	-	99	78
2153	IH1	151,377		SRB ALONE	LARC - UNITARY PLAN WIND TUNNEL 1071	-	Q7	
2165 V-01	TA2F	141,823		EXTERNAL TANK WITH AND WITHOUT PRO TUBERANCES, 0.003 SCALE	MSFC - 14-INCH TRISONIC WIND TUNNEL 596	-	1A	
2165 V-02	TA2F	141,824		EXTERNAL TANK WITH AND WITHOUT PRO TUBERANCES,O 003 SCALE	MSFC - 14-INCH TRISONIC WIND TUNNEL 596	-	1A	

INDEX OF PUBLISHED DATA EXTERNAL TANK DATA

DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER		DATASET 2-CHARA DESCRIF	CTER
2165 V-03	TA2F	141,825		EXTERNAL TANK WITH AND WITHOUT PRO TUBERANCES,O OO3 SCALE	MSFC - 14-INCH TRISONIC WIND TUNNEL 596	-	14	
2165 V-04	TA2F	141,826		EXTERNAL TANK WITH AND WITHOUT PRO TUBERANCES,O OO3 SCALE	MSFC 14-INCH TRISONIC WIND TUNNEL 596	-	1A	
2165 V-05	TA2F	141,827		EXTERNAL TANK WITH AND WITHOUT PRO TUBERANCES,O OO3 SCALE	MSFC - 14-INCH TRISONIC WIND TUNNEL 596	-	1A	
2181	TA9F	134,425	•	EXTERNAL TANK	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 196	-	EY	유
2197	FH10	134,418		ET MODEL MCRO200	AEDC - HYPERVELOCITY WIND TUNNEL (F) VA291	-	тх	ORIGINAL OF POOR
2208 V-01	TA3F	144,590		MODEL NO. 470	MSFC - 14-INCH TRISONIC WIND TUNNEL 609	-	1G	PAGE
2208 V-02	TA3F	144,591		MODEL NO 470	MSFC - 14-INCH TRISONIC WIND TUNNEL 609	-	1G	7 m
2218	TH1F	151,367		EXTERNAL TANK	AEDC - HYPERVELOCITY WIND TUNNEL (F) 25A	_	TY	
2276	FH13	151,055		40-DEG NOSE-CLEAN(NO PROTUBERANCES) DOUBLE CONE(10-DEG-40-DEG)(NO PROTUBERANCES)	AEDC - SUPERSONIC WIND TUNNEL (A) E1A	-	VD	
2313 V-01	FH14	151,041		0275 SCALE SPACE SHUTTLE EXTERNAL - TANK	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL 215	-	NT	

INDEX OF PUBLISHED DATA

EXTERNAL TANK DATA

1	DMS DMS-DR-	NASA SERIES NUMBER	NASA CR NUMBER	NASA TM-X NUMBER	CONFIGURATION	TEST NUMBER	DATASET 2-CHARACTER DESCRIPTOR
	2313 V-02	FH14	151,042		.0275 SCALE SPACE SHUTTLE EXTERNAL TANK	ARC - 3.5-FOOT HYPERSONIC WIND TUNNEL - 215	NT
	2313 V-03	FH14	151,043		.0275 SCALE SPACE SHUTTLE EXTERNAL TANK	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 215	NT
	2423	FH16	151,768		30, 10,40 DEGREES CONICAL SPIKE FOR ET	ARC - 3 5-FOOT HYPERSONIC WIND TUNNEL - 237	ЗА

Table 5-1
Wind Tunnel Tests/DMS Data Processing Summary

Tests	processed	Page 100 -
Tests	in process	Page 349
10000	an process	8- Jay 4.

							TUNNEL TES	· /			· 	~~~~~~~~~				100
TEST ID	k 4 ,	RE	PORT TIT		CONFIGURATIONS TESTED	* * *	TEST PURPOSE	* *	TYPE OF TEST	*MODEL * SCAL *MACH RANG		TESTING	*	COGNIZANT TEST DMS PERSONNEL	* BASI *PUBLICA *OR COMM	NOITA
RC WT D2	- ×	LITY	DYNAMIC : AND CON' ACTERIST	TROL +		*LITY	DYNAMIC ST AND CONTR R ATP ORBI	OL +	ORCE	*0.01925 / *1.9 - *4.63	*	LARC / LARC - UNITARY PLAN	*PEN	FOURNIER, B	S*DMS-DR- *NOV ,	
	k	FA	O1925 SOL NR ATP	CALE *			IGURATION	*		*		IND TUNNEL		L. GLYNN	*	
	4	RS F	AT MACH I ROM 1 9			*		*		*	*	; (*		*	
С	×		LTS OF TA	* * RANSO*NB	PRR ORBITER	* * *TRAN	SONIC AERO	* * DVN+5	OPCE	* * *0.015 /	* * *	LARC /	* * *D	MENNELL. B	* * SP*DMS-DR-	-2002
Ť	- + /+	NIC NASA	TESTS IN /LARC 8 I SURE TUN	THE *	TIM ONDITOR		CHARACTER		ONOL	*0 3 - *1.3	*	LARC 8-FOOT TRANSO	*EN0 0N*R	CER /NR SINGELLTON	*MARCH.	
128,	k	ODEL	O O15 SC/ NR-PRR S TLE ORBI	SPACE*		*		*		* * *	*	NNEL	* * *		* * *	
C T			RSONIC AL		ATP ORBITER		RSONIC AER C CHARACTE		ORCE	* *0.0045 / *20.3 -		LARC /	* *G *√		* ARC*DMS-DR- *APRIL.	-
128.	` 4	BITE	OF NR-A R, ORBITI XTERNAL	ER WI*		*TICS *BITE *	OF NR ATP R	* OR*		* *		22-INCH HELIU TUNNEL	JM*-DI * *	MS	* *	
			ASCENT CO	ONFI * * *		*		* *		*	*	k k	* *		* * *	
	×	DYNA	MIC CHAR	ACTER*	C 040A ORBITER	*ESS	AND ALTERN	ATE*	ORCE	*0 067-	+	MSC /	-	ROMERE /MSC E VAUGHN	*DMS-DR- *NOV.,	-2004 197
B1 120,	k	ECT	CS OF LO RATIO WII URATIONS	VG CO*		*OMET	IGURATION RIES IN PR OF GROUND	ESE*		* * *	4	*15-FOOT BY 20 *FOOT SUBSONIC *WIND TUNNEL			* *	
	*	A MO	D EFFECT VING AND RY GROUN	STAT*		+ECT *		*		*	*	t :	* *		* * *	9
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TEST	*			-		GURATIONS		TEST		TYPE OF			+ TESTI			TEST DMS PERSONNEL		R COM	ATIONS
ID	*	REPORT T	ITLE	* 	Т	ESTED	* 	PURPOSE		TEST	*MACH	RANGE	* AGENC	Y 	* 	PERSUNNEL			
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							J+AEI	RODYNAMIC STAB	1*F	ORCE	+0 004			/		RAMSEY /MS W SPARKS		MS-DR	
		ITY, CONT			TER			TY AND CONTROL			+0 6		*MSFC	-			*!/	UV ,	1972
555		CTIVENESS						FECTIVENESS AN			*4 96		*14-INCH				· *		
DA1		G CHĂRACT						AG CHARACTERIS	; *		+		*IC WIND	TONNE	_*~DM:	5	*		
CR-120,0	70+S	OF A SHU	ITTLE O	₹*			*TI	CS	*		*		*		*		*		
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		N AT MACH					*		*		*		*		*		*	•	
	+5	FROM 0.6	TO 4	3*			*		*		*		*		*		*		
	*6	;		*			*		*		*		*		*		*		
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MSFC	- +A	ERODYNAMI	C STAT	I *MSF	C/NR	PARAMETR:	I *PEI	RFORMANCE, STA	B∗F	ORCE	+0 004	•	*MSFC	1		E. RAMSEY			
14TWT	- *C	STABILIT	Y AND	C*C L	AUNÇ	H AEHICLE	*IL	ITY AND CONTRO)L+		*0.6		+MSFC	-	*C		*0	iec,	1972
556	/+0	NTROL EFF	ECTIVE	N *			*CH/	ARACTERISTICS	*		*4 96					W SPARKS	*		
IA1A	*E	SS OF A P	ARAMET	R*			*		*		*		*IC MIND	TUNNE		L GLYNN	*		
CR-120,0	88 * I	C SHUTTLE	LAUNC	4*			+		*		*		*		*-DM	5	*		
	*C	ONFIGURAT	ION	*			*		*		*		*		*		*		
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ARC	- +R	ESULTS OF	INVES	T*NR	SSV	ORBITER	*ST/	ATIC STABILITY	* F	ORCE	*0 01		*ARC			CAMERON, C			
		GATIONS C					*ANI	TRIM CAPABIL	I *		*7 3	-	*ARC			ONT /NR	*M	IARCH,	1973
147		5 SCALE M					*TY	, COMPONENT IN	IC*		*		*3 5-F 0 0	T HYPE	?*T ∣	r WÄTKEA	*		
OA4		TH AMERIC					*REI	MENTAL EFFECTS	*		*			וטד סמג		R. MÖRGAN	*		
CR-128.7	60*W	ELL SPACE	SHUTT	L ተ			+		*		*		*NEL		*-DM	S	*		
		ORBITER					*		*		*		*		*		*		
		IASA/ARC 3					*		*		*		*		*		*		
	*1	YPERSONIC	WIND	*			*		*		*		₩		*		*		
		UNNEL		+			*		*		*		*		*		*		
		4,1.12-		*			*		*		*		*		*		*		
LARC	- *5	TATIC STA	RTITTY	+NR	ΔTP	ORBITER	+AEI	RODYNAMIC STAE	I*F	ORCE	*0 00	75 /	*LARC	1	*T.	BLACKSTOCK	./LA*D	MS-DR	-2008
		ND PERFOR						TY AND PERFORM			*10 3		+LARC	-	*RC		*J	IAN.,	1973
89		MARACTERIS		-				E AT HYPERSONI			*		*CONTINU	OUS-FLO)*V ∣	W SPARKS	*		
		HE A.T.P						CH NO DF 10			*					R. ZILER	*		
		R AT M=10		4			*	J,, 110 J, 10	*		*		+UNNEL		*-DM	5	*		
CK-120,1	J 1 7 L	K MI M-IC	, 0				*		*		*		*		*		*		
LARC	_ +0	מדא מזדגד:	עדז וזא	*ND	ATP	ORRITED	*AF	RODYNAMIC STAE	3I*F	ORCE	*0 00	75 /	+LARC	1	*T	BLACKSTOCK	. /LA*D	MS-DR	-2008
		ND PERFOR			MIF	O. O. I. F.		TY AND PERFORM			*10 3		*LARC	-	*RC			EVISI	
		MD PERFOR						E AT HYPERSONI			*					W. SPARKS	*M	ΙΑΥ,	1973
								CH NO OF 10			*					R. ZILER	*	•	
		HE A.T.P.		# .b.			* PIA(U11 140 U1 10	*		*		*UNNEL		*-DM		*		
CK-128.	21*5	R AT M=10) ·3	т			· ·								4	-			

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		WIND TUNNEL TEST /	/ DMS DATA	PROCESSING			102
* TEST + ID * REPORT TITLE	* * CONFIGURATIONS * TESTED	* * TEST * PURPOSE	* * TYPE OF * TEST				BASIC PUBLICATIONS OR COMMENTS
ARC - *AERODYNAMIC CHAR. 66SWT - *CTERISTICS OF TH 650 /*ROCKWELL INTERNA OA3 *TIONAL GRBITER O CR-128,761+3 AT MACH NUMBER *FROM O.6 TO 2 O *	E*A3 * A* S*	O+GEOMETRIC VARIAT? *ON, LONGITUDINAL *AND LATERAL-DIREC *TIONAL STABILITY *EFFECTS *	* 3*	*0.6 - *2.0	*ARC - *I *6-FOOT BY 6-FO* *OT SUPERSONIC *I		
MSFC - *DETERMINATION OF 14TWT - *THE AERODYNAMIC 545 /*NTERFERENCE BETW IA1B *EN THE SPACE SHU CR-120,060+TLE GRBITER, EXT *RNAL TANK, AND S *LID ROCKET BOOST *R ON A O 004 SCAI *E ASCENT CONFIGURATION *ATION	I*NK AND SRMS ON A E*D OFF T* E+ J* E* L*			*0 60 -	*MSFC - * *14-INCH TRISON* *IC WIND TUNNEL* * *	P. RAMSEY / MSFC *U - R. BUCHHOLZ /LM*N SC - E. ALLEN /RI* - J DEHART/NSI * V. W SPARKS * J R ZILER * -DMS *	
MSFC - *SPACE SHUTTLE (A' 14TWT - *P CONFIGURATION) 558 /*ABORT STAGING IN' MA9F *ESTIGATION CR-120,089* * *	+TERNAL TANK AND		I *FORCE * * * * * *	*0 004 / *0 9 - *2.0 * * *	*MSFC - * *14-INCH TRISON* *IC WIND TUNNEL* * * * * *	U RAMPY /NSI - K*I BLACKWELL / MSF** C - E. ALLEN /RI * - I FOSSLER/MSC * V. W. SPARKS * J. R. ZILER * -DMS *	APRIL. 1973 FI RIGINAL POOR C
MSFC - *AERODYNAMIC CHAR. 14TWT - *CTERISTICS OF A 554	1* * S*	*DETERMINE STATIC *AERODYNAMIC CHARA *CTERISTICS OF 16: *-INCH DIAMETER ST *B(PRR) WITH AND V *ITHOUT STRAKES *	4* 2* R*	*O 6 -	*MSFC - * *14-INCH TRISON* *IC WIND TUNNEL* * *	V W SPARKS * J R ZILER * -DMS *	APRIL, 1973 🚝 🚟

	WIND TUNNEL TEST	/ DMS DATA	PROCESSING		103
					. DACTO
* *	*	* TYPE OF	*MODEL * * SCALE* TESTING	* COGNIZANT * TEST DMS	* BASIC *PUBLICATIONS
TEST * + CONFIGURATIONS		* TYPE OF * TEST	* SCALE* TESTING *MACH RANGE* AGENCY	* PERSONNEL	*OR COMMENTS
ID * REPORT TITLE * TESTED	* PURPOSE	r 1031			
ARC - *EFFECT OF GASEOUS*SHUTTLE ORBITER/	T*PLUME EFFECTS ON	*FORCE	*0 019 / *ARC /		ARC*DMS-DR-2013
97SWT - *AND SOLID SIMULA *ANK SRM (N-040A)			*16 - *ARC -	*/ET AL	*FEB., 1974
616 /*TED JET PLUMES ON*	*TROL CHARACTERIS	T*		7-FO*V. W SPARKS	*
IA2	*ICS	*		VIC *B. J FRICKEN	*
CR-128,762*SHUTTLE LAUNCH CO*	*	*	* *WIND TUNNE	L (U*-DM5	*
NFIGURATION AT MA	*	*	* *NITARY)	*	*
CH NUMBERS FROM 1	*	*	* *	*	*
* 6 TO 2 2 *	*	*	* *	*	*
* *	*	*	* *	T CDEMOCED D	*
LARC - *RESULTS OF SUPERS*NR PRR-SSV ORBIT			*0.015 / *LARC /		ME*DMS-DR-2014
	*NAMIC CHARACTERI		*2 5 - *LARC -	*NNELL /NR	*MARCH, 1973 *
1007 /+LARC UNITARY PLA +	*TICS	*		AN W+J E VAUGHN *B_ J FRICKEN	# #
OA7 *N WIND TUNNEL ON *	*CONTROL EFFECTIV	E*	* *IND TUNNEL	_ ,	T
CR-128,753+A O15 SCALE MODE+	*NESS	*	*	*-DMS	ж
L NR-PRR SPACE SH	*MODEL COMPONENT	E*	* *	# str	ar un
*UTTLE ORBITER *	*FFECTS	*	* *	π	4
* *	*WING AREA-THICKN		* *	#	*
* *	*SS SURVEYS	*	<i>x</i> *		*
* *	*	*	*0.0075 / *LTV /	*** PUMEDE/18C	C *DMS-DR-2015
LTV - *AERODYNAMIC RESUL*NASA SSV DRBITER	*EFFECTS OF BORM	S*FUKUE	+2 4 - +MSC /	*ZIEGLER, VSD	*VOLUME O1
HSWT - *TS OF SEPARATION *ON NR EOHT WITH			*4 39 *LTV -	*J. RILEY, J.S	
, , , , , , , , , , , , , , , , , , , ,	*ITUDINAL AND LAT *RAL-DIRECTIONAL			WIN*IGGE /ROCKWELL	
IA4 +HT AERONAUTICS 4X*	*TABILITY AND CON		* * *D TUNNEL	*J E VAUGHN	*
CR-120,091*4FT HSWT DN A 00*	*ROL CHARACTERIST		* * *	*B J. FRICKEN	*
75 SCALE ROCKWELL	*KUL UMAKAGIERISI	1 *		*-DMS	*
+INTERNATIONAL-AT * +P SHUTTLE INTEGRA*	*65	•	* *	*	*
	4	*	* *	*	*
*TED VEHICLE *	* *	τ *	* *	**	*
LTV - *AERODYNAMIC RESUL*NASA SSV ORBITER	*EEEECTS OF RSDM	C*EUDUE	*0 0075 / *MSC /	*P ROMERE/JSC.	C *DMS-DR-2015
	*EFFECTS OF BSKM	3.1 0KG€	+2 4 - *LTV -	*ZIEGLER, VSD	*VOLUME 02
HSWT - +TS OF SEPARATION +ON NR EOHT WITH 458 /*TESTS ON THE VOUG+INGLE BSRM	*ITUDINAL AND LAT			WIN*J RILEY. J S	. P∗JULY. 1973
IA4 +HT AERONAUTICS 4F+	*RAL-DIRECTIONAL		* *D TUNNEL	*RIGGE/RI	*
CR-120,091+T X 4FT HSWT ON A*	*TABILITY AND CON		* *	+J. E VAUGHN	*
* 0075 SCALE ROCK *	*ROL CHARACTERIST		* *	*B. J FRICKEN	*
WELL INTERNATIONA	*CS	*	* *	*-DMS	*
VELL INTERNATIONA *L-ATP SHUTTLE INT*	*	*	* *	*	*
*EGRATED VEHICLE *	*	*	* *	*	*
**************************************	*	*	* *	*	*
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					WIND T	UNNEL TEST	/ DI	ATAD RN	PROCES!	SING				
TEST		 * *	* *	CONFIGURATIONS	*	TEST	* * 7	TYPE OF	*MODEL	SCALE	* * TESTING	*	COGNIZANT TEST DMS	* BASIC *PUBLICATI
1D		* REPORT T	ITLE *	TESTED		PURPOSE	*	TEST	*MACH I	RANGE	* AGENCY	*	PERSONNEL	*OR COMMEN
IRLAD	_	*DECULTE DE	TAN/CCT+6U	R ATP ORBITER	***************************************	NIC AERODY	NA FOR	205	*O 040!	= /	*ND /	, *D	. MENNELL /NR	*DMS~DR~20
SWT		*KESULIS UF *IGATIONS O	-			HARACTERIS		KÇE	*0 165	-	*NRLAD ~		. SINGELLTON	*APRIL, 1
89		*405 SCALE			*CS	INNAOTENIA	*		*0 26		*LOW SPEED			*
A2		*TP VERSION			*		*		*		*TUNNEL	*		*
		+NR-SSV ORB			*		*		*		*	*		*
,	-	*THE NORTH			*		*		*		*	*		*
		*AN AERONAU			*		*		*		*	*		*
		*ABORATORY			*		*		*		*	*		*
		*ED WIND TU			*		*		+		*	*		*
		*			*		*		*		*	*		*
RLAD	-	*RESULTS OF	INVEST*N	R ATP DRBITER	*SUBSO	NIC AERODY	NA*FO	RCE	+0 040	5 /	*NR /	′ *R	KINGSLAND /NR	*DMS-DR-20
WT		*IGATIONS D				HARACTERIS			+0 165	-	*NRLAD -	*R	SINGELLTON	*APRIL, 1
90	1	*405 SCALE	MODEL P*		*CS		*		+0 26		*LOW SPEED	WIND*-	DMS	*
۱5	•	*RR VERSION	OF THE*		*		*		*		*TUNNEL	*		*
- 123.	851	*NR-SSV ORB	ITER IN+		*		*		*		*	*		*
		*THE NORTH	AMERIC *		*		*		*		*	*		*
		AN AERONAU	TICAL L		*		*		*		*	*		*
		ABORATORY	LOW SPE		*		*		*		*	*		*
		*ED WIND TU	NNEL *		*		*		*		*	*		*
		*	*		*		*		*		*	*		*
RLAD	-	*CROSS WIND	LOADS *A	TP LAUNCH CONFIG	*CROSS	WIND LOADS	*F01	RCE	*0.019	25 /	*NR /	′ *L	S. KATOW /RI	*DMS-DR-20
SWT	-	*INVESTIGAT	ION OF *U	RATION	*		*		*0 069	-	*NRLAD ·	- *T	. L. MULKEY	*JUNE, 1
33	- /	*A 01925 S	CALE MO*		*		*		*0 25		*LOW SPEED	WIND*S	. W BROWN	*
43		*DEL OF THE	ATP-SS*		*		*		*		*TUNNEL	*~	DMS	*
7-128,	755	*V LAUNCH C	ONF I GUR*		*		*		*		*	*		*
		*ATION	*		*		*		*		*	*		*
		*	*		*		*		*		*	*		*
RLAD				TP AND PRR ORBIT	T*INVES	TIGATE CON	IF I * FOI	RCE	+0 040	- ,	*NR		B. KINGSLAND/	
SWT		*DINAL AND		Ŕ		ION VARIAB			+0 165				CKWELL	*JUNE, 1
94	•	*STABILITY				IMPROVE TO	IUC*		*0 26				L. MULKEY	*
46		*TERISTICS			*HDOWN		*		*		*TUNNEL		A. SARVER	*
₹-128,		*PRR SHUTTL			*CAPAB	ILITIES	*		*		*	* -1	DMS	*
		*ER CONFIGU	RATION *		*		*		*		*	*		* _
		*	*		*		*		*	_ ,	* ***	* /	D KINDELAND	*DMC_DD 00
RLAD		*LOW SPEED		RR URBITER		IZE PRR PL		RCE	*0 040		*NR		B. KINGSLAND,	
SWT		*GATION OF				WING IN AN			*0 16		*NRLAD		KATOW /RI	*JUNE, 1
96		*PLANFORM W				F GROUND E	FF*		*0 26				A. SARVER	т 4
79		*TH IN AND			*ECT		*		*		*TUNNEL	* ~	DMS	*
	757	*GROUND EFF	FCT ¥		*		•		*		*	*		<i>₹</i>

OF POOR	
QUALITY	PAGE

							- -			TUNNEL TEST											
		*				*			*		*		+MODE	_	*		*	COGNIZ		* BAS	
	TEST	*				*	COV	IFIGURATIONS	*	TEST		TYPE OF			+ TESTI		*	TEST DI		*PUBLIC	
	ID	*	REPOR	TTI	TLE	+		TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENC	Υ	*	PERSO	NNEL 	*OR CO	MMCN 1 2
NRL.	\D	- +	PRESSUR	E LO	ADS A	/N*-	89A	ORBITER		SURE LOADS		RESSURE		-	*NR	/			L /ROCKI	W*DMS-DI	
LSW	Γ	- *1	AEROD	YNAM	IC F)R*			*TA I	N GROUND EI	FFE*		*0.2		*NRLAD	-	*EL1			*VOLUMI	
699		/*	CE INFO	RMAT	ION I	*0			*CT		*		*		*LOW SPE	ED MIN			MERLE	*NOV ,	197
OA4			₹ THE -						*		*		*		*TUNNEL		*-D!	NS .		*	
CR-	128,7	58+	SHUTTLE	ORB	ITER	C*			*		*		*		*		*			*	
		*	ONFIGUR	ATIO	N	*			*		*		*		*		*			*	
		*				*			*		*		*		*	,	*_		/55514	*	
NRL							·89A	ORBITER		SURE LOADS			*0 2	-	*NR	/			L /ROCK	w+DMS-DI	
LSW) AEROD							N GROUND EF	FE*		*0 2		*NRLAD	-	*ELI		45DLC	*VOLUMI	
699			CE INFO						*CT		*		*		+LOW SPE	ED MTV			MEKLE	*uCi.,	197
OA4			THE -					•	*		*		*		*TUNNEL		*-DI	15		** .t.	
CR-	128.7		SHUTTLE			C*			*		*		*		*		*			**	
		*	ONFIGUR	ATIC	N	*			*		*		*		*		*			*	
		+				*			*		*		*	/	*	,	ж	D 247414	201 4412		
NRL.							8- IS	98 ORBITER				ORCE	*0 04	,	+NR	/		B KING	aprand /	/*DMS-DI	
LSW			CTERIST							RAL-DIRECT			*0 16		*NRLAD *LOW SPE	 	*RI		/ EV	*JUNE,	197
698		•	ROCKWEL							TABILITY L	EVE*		+0.26			ED MTM				~ •	
DA 1			TIONAL		-				*LS		*		*		*TUNNEL		*-DI	W. BROV	MIA	±	
CR-	128,7		SHUTTLE			*			*		*		*		*		*-01	412		*	
		*	CONFIGU	RATI	ยพ	*			*		- A-		- ₹		4		- T			*	
	_	*				*			*	B447447 18485	* 300#7		* ^ ^	050 /	*LARC	,	*D	STONE /	/LADC	*DMS-DI	2-2025
LAR							.U-1C	OO ORBITER		RMINE HYPER	_	URCE	*20 3		*LARC	_		W SPA		*JUNE	
22H			CHARA							PERFORMANCE			*20.3	-	*22~INCH					*	,,,,
411		•	AND OIL						-	IC STABILIT			*20.3	U	*TUNNEL	HELLIC	טיויות *-D!		VLK	*	
LA2			ELECTRO			*				CONTROL	*		T .		. I DIMIACE		* - D)	43		*	
CR-	128,7		RESULTS							CTIVENESS A			-		*		*			*	
			5 SCALE							INE FLOW AT HE LO-100 (, +		*		*			*	
			GLEY CO						*ITER		יטאכ		·		*		*			*	
			E SHUTT						*115K						*		*			*	
			(LO-100	•					-T-				•		*		*			*	
		W.	H NUMBE	K UF	20.1	3 *			* •				*		*		*			*	
400			JIND TO	A18.1F-1	TEC:	ተ ፈ/	101	SPACE SHUTTI	*CTAD	TITTY AND	nnw:	ODCE	*0.01	a /	*ARC	1	*R.	B HAR	DIN /RI	*DMS-DI	R-2024
ARC		- +	MIND IO	NINEL	0 (0.	1 T\	74UA : TNIT	EGRATED VEH	. FOI AD	DATA WIND	2 D*F	DESCRIPE	*0 9	-	*ARC	<u>-</u>		L MULI	•	*AUGUS	
11T			JP IHE A) JET							URE AND NO		RESSORE	+1.2		*11-F00T	TRANS				*	
686 IA7			A) UET E SHUTT							ESSURE DIS			*		*NIC WIN				_	*	
			TED VEH						*BUTI		*		+		*L (UNIT		*			*	
CK-	128,/		E ARC 1						*	0143	*		*		+	.,,	*			*	
			TARY WI						*		*		*		*		+			*	
		- 4	INKI WI	I¥L/	CHARACT	_ *			**												

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* * CONFIGURATION  TEST * * CONFIGURATION  ID * REPORT TITLE * TESTED	*	*MODEL * OF * SCALE* TESTING T *MACH RANGE* AGENCY	* COGNIZANT * BASIC * TEST DMS *PUBLICATIONS * PERSONNEL *OR COMMENTS
MSFC - *AERODYNAMIC CHARA*142-INCH DIAME*  14TWT - *CTERISTICS OF A 1*SRB WITH AND W  565	IT *STATIC AERODYNAMI*  *C FORCES AND MOME*  *NTS WITH COMPONEN*  *  *  *  *  *  *  *  *  *  *  *  *	* * *IC WIND TUNN  * * *  * * *  * * *  * * * *  * * * *  * * * * *  * * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * *  * * *  * *  * * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *	*V W. SPARKS *  *A T. KAVANAUGH *  *-DMS *  *  *  *PAUL RAMSEY/MSFC *DMS-DR-2026  *- M K ROBERTSON*SEPT , 1973

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			WIND TO	UNNEL TEST	/	DMS DATA	PROCES	SSING						107
		*	+		*		+MODEL		*	*	(	COGNIZANT	* BASI	10
TEST	*	+ CONFIGURATIONS	5 +	TEST	*	TYPE OF			* TESTI	NG *	TE	EST DMS	*PUBLICA	ATIONS
ID	* REPORT TITLE	+ TESTED	-	PURPOSE	*	TEST	*MACH	RANGE	* AGENC	Y *		PERSONNEL	*OR COM	MENTS
MSFC	- *AN INVESTIGATION	ADOD WITH ST AND	) +DETED	WINE DDESSI	ID*P	DESSIDE	+ <u>0</u> 004	1 /	*MSFC	/ *	P E.	. RAMSEY /	MS*DMS~DR	-2027
14TWT	- *IN THE NASA MSFC			TRIBUTION O			*0 6		*MSFC		FC		*VOLUME	02
567	/*14-INCH TRISONIC			, SRB, ORBI			*4.96		*14-INCH	TRISON*	V. W.	. SPARKS	*OCT ,	(975
1A32FB	+WIND TUNNEL TO DI		*ER WI		·`*		*					MOSER JR	*	
	808*TERMINE THE PRES		*		*		*		*	*	-DMS		*	
OK 1-41,	+URE DISTRIBUTION		*		*		*		*	*			*	
	*OVER THE COMPONEN		*		*		*		*	*			*	
	*TS OF A 0.004 SCA		* /		*		*		*	*			*	
	*LE VERSION OF TH		*		*		*		*	*			*	
	*ROCKWELL MCR 007		+		+		*		*	+			*	
	*4 BASELINE SHUTTI		*		*		*		*	+			*	
	*E ASCENT CONFIGUR		*		*		*		*	*			*	
	*ATION (IA32F)	*	*		*		*		*	*			*	
	*	*	*		*		*		*	*			*	
MSFC	- +AN INVESTIGATION	+ORB WITH 2 SRB	'S*DETER	MINE PRESSU	JR+P	RESSURE	*0 004	4 /	*MSFC	/ *	P E		SFC*DMS-DR	
14TWT	- *IN THE NASA MSFC	*	*E DIS	TRIBUTION O	)V*		<b>*</b> 0 6		*MSFC		V W		*VOLUME	-
567	/*14-INCH TRISONIC	*	*ER ET	, SRB, ORBI	<b>T</b> *		*4 96		*14-INCH			. MOSER JR	*OCT.,	1975
IA32FB	+WIND TUNNEL TO DE	E*	*ER WI	NG	*		*		*IC WIND	TUNNEL*	-DMS		*	
CR-141,	809*TERMINE THE PRESS	S*	*		*		*		*	*			*	
	*URE DISTRIBUTION	*	*		*		*		*	*			*	
	*OVER THE COMPONER	N*	*		*		*		*	*			*	
	*TS OF A 0.004 SCA	A+	*		*		+		+	*			*	
	*LE VERSION OF TH	E+	*		*		*		*	*			*	
	*ROCKWELL MCR 007	*	*		*		*		*	*			*	
	*4 BASELINE SHUTT	L*	*		+		*		*	*			*	
	<b>★E ASCENT CONFIGU</b>	R*	*		*		*		*	*	•		*	0.0
	*ATION (IA32F)	+	*		*		*		*	*			*	유유
	*	*	*		*		*		*	*			*	200

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					WIND	TUNNEL TE	ST /	DMS DATA	PROCES	SING					,
	*		<u>-</u> +		*		*		+MODEL		*	*		COGNIZANT	* BASIC
TEST	*		* (	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTI	vig *		EST DMS	*PUBLICATION
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST			* AGENC			PERSONNEL	*OR COMMEN
SFC	- *7	RIPLE BALANCE TE	*MCF	0074 ORBITER	*TO (	DBTAIN FOR	CE A*F	ORCE	*0.004	/	*MSFC	/ *	P.RA	MSEY/NASA	*DMS-DR-20
4TWT		T OF THE PRR BAS				MOMENT DAT		<del></del>	<b>*0 6</b>		*MSFC			VIS/NSI	*VOLUME O1
70	/*E	LINE SPACE SHUTT	*			HE MCR 007-			*4.96		*14-INCH			•	*DEC . 19
A31FB	* [	F CONFIGURATION	*		*BITI	ER (PRR BA	SELI+		*		*IC WIND				*
R-134,4	134*(	TWT 570)	*			. EXTERNAL			*		*		-DMS		*
	*	·	*			AND SOLID			*		*	*			*
	*		*			BOOSTER IN			*		*	*			*
	*		*		*LAUI	NCH CONFIG	URA *		*		*	*			*
	*		*		*TI0	N AND TO I	DENT+		+		*	*			*
	*		+		*IFY	KEY SIMUL	*OITA		*		*	*	:		*
	+		*			ARAMETERS			*		*	*	:		*
	*		*		*E U	SED IN LAU	NCH *		*		*	•	:		*
	*		*			ICLE WIND			*		*	*	:		*
	*		*			TESTS	*		*		*	*	:		*
	*		*		*		*		*		*	*	:		*
SFC	- *T	RIPLE BALANCE TE	*MCF	0074 ORBITER	*TD (	ORTAIN FOR	CE A*F	DRCF	*0.004	1	*MSFC	/ *	PR	AMSEY/NASA	*DMS-DR-20
4TWT		T OF THE PRR BAS				MOMENT DAT		0.102	*0 6	•	*MSFC	•		AVIS/NSI	*VOLUME 02
70		LINE SPACE SHUTT				HE MCR 007			*4.96					I. SPARKS	*DEC , 19
A31FB	-	E CONFIGURATION				ER (PRR BA			*		*IC WIND				*
		TWT 570)	*			. EXTERNAL			*		*		-DMS		*
, .	*	, 5.0,	*			AND SOLID			*		*	4		•	*
	*		*			BOOSTER IN			*		*	*	:		*
	*		*			NCH CONFIG			*		*	*	:		*
	*		*			I DT DNA P			*		*	ak.	:		*
	*		*			KEY SIMUL			*		*	a			*
	*		*			ARAMETERS			*		*	×	:		*
	*		*			SED IN LAU			*		·				*
	*		•			ICLE WIND			*		*				*
	*		*			TESTS	1 OMM		•		~ →				*
	*		*		*	16313	*		*		±				*
SFC	~ *D	ESULTS OF A STAT	*2A	ODRITED	*DETI	ERMINE STA		npce	* 0.00	1 /	*MSEC	/	FC	ALIEN T	TU*DMS-DR-20:
4TWT		C STABILITY AND						OKOL	* 0.00 *0 6	•	*MSFC	•		T FOSTER	
68		ONTROL EFFECTIVE				L EFFECTIV			*4 96		*14-INCH				/ **IBM 1 , 1 .
A47		ESS INVESTIGATIO			*S	L EFFECTIV	E14E3,		*4 50			-		VAUGHN	
		OF A 0.004 SCAL		STIER BUILDUP	<i>*3</i>		<b>.</b>		ı.		4 TO WIND			. MORGAN	· ·
n 120,1		2A ORBITER IN T			τ •		*		<i>™</i>		7 14		-DMS		ur Na
		E MARSHALL SPACE			*		*		<b>↑</b>		4	4	- UNIS	•	~ •
		LIGHT CENTER TR			# .L		77 J-		7 L		- <del>-</del>	7			<b>*</b>
					T'		<b>₩</b>				T	7			<del>ν</del> Ψ
		SONIC WIND TUNNE (MACH=0 6-4.96)			* 		*		# _		<b>*</b>	7			<del>1</del>
		I MALIMED NEA 961	T		<b>₹</b>		*		*		x				~

	WIND TUNNEL TEST A	/ DMS DATA	PROCESSING			109
* *	*	*	+MODEL	*	* COGNIZANT	* BASIC
TEST * * CONFIGURATIONS	* TEST	* TYPE OF	* SCALE	E* TESTING	* TEST DMS	*PUBLICATIONS
<pre>ID * REPORT TITLE * TESTED</pre>	* PURPOSE	+ TEST	<b>≁MACH RANG</b>	E* AGENCY	* PERSONNEL	*OR COMMENTS
		<b>_</b>				Labue bb some
NRLAD - *AERODYNAMIC CHARA*-89B ROCKWELL IN			*0 0405 /	•	*R B. KINGSLAND	
LSWT - *CTERISTICS OF VAR*ERNATIONAL SPACE			*0 16 -	,	*RI	*AUGUST, 1973
700 /*IOUS AFT-END CONF+SHUTTLE ORBITER	-	<b>*</b>	*	*LOW SPEED WIND  *TUNNEL	*W M HALE	*
OA14 *IGURATIONS OF THE*	*CHING MOMENT	*	<i>τ</i>	* I CININEL	*-DMS	** **
CR-128,768*ROCKWELL INTERNA *	<i>a</i>	* *	<b>.</b>	•	* 5/1/3	*
*TIONAL -89B SPACE*	* *	*	* •	*	T.	*
*SHUTTLE ORBITER *	4 4	·	* *	*	*	*
LARC - +HYPERSONIC PERFOR*LO-100 ORBITER	*ELEVON AND BODY F	*FODCE	+0 010 /	*LARC /	*PETER T. BERNOT	/*DMS-DR-2031
CFHT - *MANCE, STABILITY *	*LAP EFFECTIVENESS		+10 3 -	,	*LARC	*JUNE. 1973
B5 /*AND CONTROL CHARA*	*	,· +	*	*CONTINUOUS-FLO		*
LA3 *CTERISTICS OF A O*	*	*	*	*W HYPERSONIC T		*
CR-128,769* 010 SCALE MODEL *	*	*	*	*UNNEL	*-DMS	*
*OF A LANGLEY CONC*	*	*	*	*	*	*
*EPT SPACE SHUTTLE*	*	*	*	*	*	*
*ORBITER *	*	*	*	*	*	*
* *	*	*	*	*	*	*
ARC - +RESULTS OF TESTS +17-OTS	*TO OBTAIN AERODYN	1*FORCE	* 0 030 /	*ARC /	*GILLENS, SPANGLE	ER*DMS-DR-2032
11TWT - +0A12 AND IA9 IN T*	*AMIC LOADS ON LAL	]*	* 0 6 -	*ARC -	*/RI	*VOLUME O1
707 /*HE AMES RESEARCH *	*NCH VEHICLE	*	*14	*11-FOOT TRANSO	*H C ZIMMERLE	*NOV , 1973
B7SWT - *CENTER UNITARY *	*	*	*	*NIC WIND TUNNE	*-DMS	*
707 /*PLAN WIND TUNNELS*	*	*	*	*L (UNITARY)	*	*
IA9A.B.C *ON AN O O3O-SCAL *	+	*	*	*8-FOOT BY 7-FO	*	*
OA12A,C *E MODEL OF THE SP*	*	*	*	*DT SUPERSONIC	*	*
CR-128,794*ACE SHUTTLE *	*	*	*	*WIND TUNNEL (U	*	*
*VEHICLE 2A TO DET*	*	*	*	*NITARY)	*	*
*ERMINE AERODYNAMI*	*	*	*	*	*	*
*C LOADS *	+	*	*	*	*	*
* *	*	*	*	*	*	*
ARC - *RESULTS OF TESTS *17-OTS	*TO OBTAIN AERODYN		* 0 030 /	•	*GILLENS, SPANGLE	
11TWT - +DA12 AND IA9 IN T+	+AMIC LOADS ON LAU	J*	+ 0 6 -		*/RI	*VOLUME O2
707 / THE AMES RESEARCH *	*NCH VEHICLE	*	*1.4		*H C. ZIMMERLE	*NOV., 1973
B7SWT - *CENTER UNITARY *	*	*	*	*NIC WIND TUNNE		*
707 /+PLAN WIND TUNNELS+	*	*	*	(0,10,7,1117)	*	r ±
IA9A,B,C *ON AN O O3O-SCAL *	*	*	*	*8-FOOT BY 7-FO		-7 -14
DA12A,C *E MODEL OF THE SP*	*	*	¥*	*OT SUPERSONIC		ு ±
CR-128,794*ACE SHUTTLE *	*	*	**	*WIND TUNNEL (U	Т	-π - <b>±</b>
*VEHICLE 2A TO DET*	*	<b>*</b>	7	+NITARY)	*	*
*ERMINE AERODYNAMI *	*	#	4	1 1	· ·	*
+C LOADS +	*	T	<del>*</del>	4	# ₩	**
*	*	₹	*	•	<b>T</b>	<del></del>

					WIND	TUNNEL TEST	/	DMS DATA	PROCES	SING							110
	+		*		*		*		+MODEL		*		*	COGNI	ZANT	* BAS	IC
TEST				CONFIGURATIONS	*	TEST					* TESTI		*	TEST D	MS	*PUBLIC	ATIONS
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENO	Υ	*	PERSO	NNEL	+OR COM	MENTS
~~~~																	
AŖC	- *R	ESULTS OF TESTS	* 1	7-0TS	*TO 0	BTAIN AERODY	'N+F	ORCE	* 0 00	30 /	+ARC	1	*GI	LLENS,	SPANGLER	+DMS-DR	-2032
		A12 AND IA9 IN			*AMIC	: LOADS ON LA	₩.		* 0 6	-	*ARC	-	*/R	!I		*VOLUME	03
		IE AMES RESEARCH	*		*NCH	VEHICLE	*		*14		*11-F00T				MERLE	*OCT.,	1973
87SWT			*		*		*		*		*NIC MIV			MS		*	
707		LAN WIND TUNNEL			*		*		*		+L (UNIT					*	
		IN AN O 030-SCAL			*		*		*		*8-FODT					*	
		MODEL OF THE S	P*		*		*		*		*OT SUPE					*	
CR-128,			*		*		*		*		*WIND TU	—	(υ*			*	
		'EHICLE 2A TO DE		•	*		*		*		*NITARY))	*			*	
		RMINE AERODYNAN	! *		*		*		*		*		*			*	
		LOADS	*		*		*		*		*		*			*	
	*		*		*		*		*		*		*			*	
ARC		RESULTS OF TESTS				BTAIN AERODY		RESSURE							SPANGLER		
11TWT		A12 AND IA9 IN				: LOADS ON, LA	∖U*		+ 0 6	-	*ARC					*VOLUME	
707		IE AMES RESEARCH	*		*NCH	VEHICLE	*		+1.4		*11-F00T				MERLE	*DEC ,	1973
87SWT			*		*		*		*		*NIC MIV			DMS		*	
707		LAN WIND TUNNEL			*		*		*		*L (UNIT					*	
		N AN O.O3O-SCAL			*		*		*		*8-F00T	-				*	
DA12A,C		MODEL OF THE S	P*		*		*		*		*OT SUPE					*	
CR-128,		CE SHUTTLE	*		*		*		*		*WIND TU		(U*			*	
		'EHICLE 2A TO DE			*		*		*		*NITARY))	*			*	
	*E	RMINE AERODYNAM	! *		*		*		*		*		*			*	
	*C	LOADS	*		*		*		*		*		*			*	
	*		*		*		*		*		*		*			*	
ARC		ESULTS OF TESTS				BTAIN AEŖODY		RESSURE			*ARC	. /	*G	ILLENS,	SPANGLER	R*DMS-DR	-2032
11TWT		A12 AND IA9 IN				LOADS ON LA	\U*		* 0 6			· _		SI.		*VOLUME	
707		IE AMES RESEARCH	*		*NCH	VEHICLE	*	•	*1.4		*11-F001				MERLE	*DEC.,	1973
87SWT			*		*		*		*		*NIC MIN			OMS		*	
707		LAN WIND TUNNEL			*		*		*		*L (UNI1					*	
		N AN O.030-SCAL			*		*		*		*8-F00T					*	
		MODEL OF THE S	P*		*		*		*		*OT SUPE					*	
CR-128,		CE SHUTTLE	*		*		*		*		*WIND TU		(U*			*	
		EHICLE 2A TO DE			*		*		*		*NITARY))	*			*	
		RMINE AERODYNAM	I *		*		*		+		*		*			*	
	*0	LOADS	*		*		*		*		+		*			*	
	*		*		*		*		*		*		*			*	

		WIND TUNNEL TEST	/ DMS DATA	PROCESSING			111
	*	*	*	*MODEL	*	COGNIZANT * BASIC	C
TEST *	* CONFIGURATIONS	s * TEST	* TYPE OF		* TESTING * T	EST DMS *PUBLICAT	TIONS
ID * REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RANGE		PERSONNEL *OR COMME	ENTS
C - *RESULTS OF TESTS	*17-0TS	*TO OBTAIN AERODY	N*PRESSURE	+ 0 030 /		ENS, SPANGLER*DMS-DR-2	
TWT - *OA12 AND IA9 IN	T*	*AMIC LOADS ON LA	U*		*ARC - */RI	*VOLUME (
7 /*HE AMES RESEARCH	*	*NCH VEHICLE	*	*14.	*11-FOOT TRANSO*H C	ZIMMERLE *DEC.,	1973
SWT - *CENTER UNITARY		*	*	*	*NIC WIND TUNNE*-DMS	*	
7 /+PLAN WIND TUNNEL		*	+	*	*L (UNITARY) *	*	
9A.B.C +DN AN O 030-SCAL		*	*	*	*8-FOOT BY 7-FO*	*	
12A,C *E MODEL OF THE S		*	*	*	*OT SUPERSONIC *	*	
-128.794*ACE SHUTTLE	*	*	*	*	*WIND TUNNEL (U*	*	
*VEHICLE 2A TO DE	T+	*	*	*	+NITARY) *	*	
*ERMINE AERODYNAM		*	*	*	*	*	
*C LOADS	*	*	*	*	* *	*	
*	*	*	*	*	* *	*	
C - *RESULTS OF TESTS	*17-0TS	*TO OBTAIN AERODY	N*PRESSURE	* 0 030 /	*ARC / *GILL	ENS. SPANGLER*DMS-DR-2	2032
TWT - *OA12 AND IA9 IN		*AMIC LOADS ON LA	U*	* 06 -	*ARC - */RI	*VOLUME (07
7 /*HE AMES RESEARCH		*NCH VEHICLE	*	*1 4	*11-FOOT TRANSO*H C	. ZIMMERLE *DEC .	1973
SWT - *CENTER UNITARY		*	*		*NIC WIND TUNNE*-DMS		
7 /*PLAN WIND TUNNEL		*	*	*	*L (UNITARY) *	*	
9A.B.C *ON AN 0.030-SCAL		*	*	*	*8-FOOT BY 7-FO*	*	
12A,C *E MODEL OF THE S		*	+	•	*OT SUPERSONIC *	*	
	*	*	*	*	*WIND TUNNEL (U*	*	
*VEHICLE 2A TO DE		*	*		*NITARY) *	*	
+ERMINE AERODYNAM		*	*	+	* *	*	
*C LOADS	*	*	*	*	* *	*	
TO LUADS	*	*	*	*	* *	*	
C - *RESULTS OF TESTS	* 17_DTS	*TO OBTAIN AERODY	M*PDFSSIIRE	* 0.030 /	*ARC / *GILL	ENS, SPANGLER*DMS-DR-2	2032
TWT - *0A12 AND IA9 IN		*AMIC LOADS ON LA			*ARC - */RI	*VOLUME (
		*NCH VEHICLE	*		*11-FOOT TRANSO*H. C	ZIMMERLE *DEC ,	1973
D7		*	*		*NIC WIND TUNNE*-DMS		
75W1 - *CENTER UNITARY 27 /*PLAN WIND TUNNEL		•	¥		+L (UNITARY) *	*	
•		•	 *		*8-FOOT BY 7-FO*	*	
A9A,B,C *ON AN O O3O-SCAL		 *	•		*OT SUPERSONIC *	*	
A12A,C *E MODEL OF THE S		rr str	*		*WIND TUNNEL (U*	*	
R-128,794*ACE SHUTTLE	* Tu	•• •	*		*NITARY) *	*	
*VEHICLE 2A TO DE		r. 4b	*	*	*	*	
*ERMINE AERODYNAM	1 T	τ •	" •	*	* *	*	
*C LOADS	ж ,	л 	1 1	- •	· · · · · · · · · · · · · · · · · · ·	*	
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			WIND TUNNEL TEST	/ DMS DATA	PROCESSING	3		1	112
	*	*	*	*	+MODEL	*	* COGNIZANT	* BASIC	
TEST	*	* CONFIGURATIONS	S * TEST	* TYPE OF	* SCAL	LE* TESTING	* TEST DMS	*PUBLICATION	ONS
ID	* REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RANG	GE* AGENCY	* PERSONNEL	*OR COMMENT	TS.
_									
C TWT	- *RESULTS OF TESTS		*TO OBTAIN AERODY			•	*GILLENS, SPANO		
7	- *OA12 AND IA9 IN /*HE AMES RESEARCH		*AMIC LOADS ON LA	U¥	* O 6 -	*ARC -	*/RI	*VOLUME 09	
	- *CENTER UNITARY	•	*NCH VEHICLE	*	*1 4 *		SO*H C ZIMMERLE	E *JAN , 19	9/4
7	/*PLAN WIND TUNNEL		*	*	*	*NIC WIND TUN		*	
	C *ON AN O.O3O-SCAL		*	*	*	*L (UNITARY)		*	
12A,C		="	*	≭	- *	*8-FOOT BY 7-		*	
	*E MODEL OF THE S 794*ACE SHUTTLE		<i>∓</i> ⊥	∓	# .u.	*OT SUPERSONI		*	
120,1	*VEHICLE 2A TO DE		τ· ±	т ш	T-	+WIND TUNNEL	<i>(</i> υ _*		
	+ERMINE AERODYNAN		* *	~	# *	*NITARY) *	ጥ ታ		
	*C LOADS	11 +	* •	*	#	+	*	*	
	*C LUADS	*	*	*	*	T	*	*	
С	- *RESULTS OF TESTS	* * 47 OTC	**************************************	* Wannengune	* 0.000	* /	* *************************************	* 01 ED DMC DD 00/	~~
		· · · · · · · · · · · · · · · · · · ·	*TO OBTAIN AERODY		,	/ *ARC /	*GILLENS, SPAN		
7	- *OA12 AND IA9 IN /*HE AMES RESEARCH		*AMIC LOADS ON LAT *NCH VEHICLE	*	* 0.6 - *1 4	*ARC -	*/RI SO*H. C ZIMMERLI	*VOLUME 10 E *JAN , 19	974
-		*	*NCH VEHICLE	* u	* 1 4 *	*NIC WIND TUN		E *UAIV , I:	9/4
7	/*PLAN WIND TUNNEL		*	*	*	*L (UNITARY)		•	
	+ON AN 0.030-SCAL		•	*		+8-FOOT BY 7-			
12A.C	*E MODEL OF THE S		•	•	•	*OT SUPERSONI			
-	794*ACE SHUTTLE	*	•	•	•	*WIND TUNNEL		Ψ	
120,7	*VEHICLE 2A TO DE		*	4	- -	*NITARY)	, to	, •	
	*ERMINE AERODYNAN		Ψ.	·	•	**************************************	•	*	
	*C LOADS	11 m		±			•	<u>.</u>	
	* 20453	τ υ	* •	→	τ	т ш	*	τ Ψ	
С	- *RESULTS OF TESTS	* +17-0TC	*TO OBTAIN AERODY	, N*DDEccupe	* 0 020	/ *ARC /	*GILLENS, SPAN	CI ED*DMC-DD-301	22
TWT	- +OA12 AND IA9 IN		*AMIC LOADS ON LA		* 0 030 /	*ARC -	*/RI	*VOLUME 11	02
7	/*HE AMES RESEARCH		*NCH VEHICLE	*	*1.4		SO*H C. ZIMMERLI		974
SWT	- *CENTER UNITARY		*NCH VEHICLE	· •	* 1.4	*NIC WIND TUN		C *UMN , 1:	514
7	/*PLAN WIND TUNNEL		* *	*	*	*L (UNITARY)		*	
•	*DN AN O.030-SCAL		*	*	*	*8-FOOT BY 7-		*	
12A.C			*	¥	*	*OT SUPERSONI		*	
	794*ACE SHUTTLE	*	±.	•	·	+WIND TUNNEL		*	
,20,1	*VEHICLE 2A TO DE		•	*		*NITARY)	*	u.	
	*ERMINE AERODYNAN			*	*	*NITART)	*	*	
	*C LOADS	4A "		*	*	*	· *	*	
	*	*	*	*	*	*	*	*	
		•	•	•	•	•	•	•	

					WIND	TUNNEL TEST	f /	DMS DATA	PROCES	SING						11
									*MODEL		*	*	co	GNIZANT	* BAS	
TECT		*		* CONFIGURATION	~ ~	TEST	Ĵ	TYPE OF			* TESTIN			T DMS	*PUBLIC	
TEST		* DEDOD			-	PURPOSE		TEST			* AGENCY			RSONNEL	*OR COM	
ID		* REPORT		* TESTED	*											
RC		which is to	OF TESTS	+ 17-OTC	*TU	OBTAIN AEROI	DVNI≠¤	DESCUDE	* O 03	n /	+ARC	/ *	GILLEN	IS. SPANGLE	R*DMS-DR	-2032
			OF TESTS			C LOADS ON		KESSOKE	+ 0 6				/RI		*VOLUME	
1TWT						VEHICLE	*		*1.4		*11-F00T			ZIMMERLE	*JAN .	197
07			RESEARCH		114011	VEHILOCE			Ψ		*NIC WIND				*	
7SWT			JNITARY				4				*L (UNITA				*	
07			ND TUNNELS		# .b.		- T-				*8-FOOT B	•			*	
			030-SCAL		*		- 		1		*OT SUPER				*	
A12A,C			OF THE SP		Ψ.		*		*		*WIND TUN					
R-128,1		*ACE SHUT		*	*		Ψ.		*			אבר (טיי			- T	
			2A TO DET		*		*		*		*NITARY)	*			*·	
	•	*ERMINE /	AERODYNAMI	*	*		*		*		*	*			*	
	1	*C LOADS		*	*		*		*		*	*			*	
		*		*	*		k		*		*	*			*	
₹C	_	*RESULTS	OF TESTS	*17-0TS	*TO	OBTAIN AEROI	DYN*P	RESSURE	* 0 03			•		IS, SPANGLE		
1TWT			T NI PAI C		*AMI	C LOADS ON I	LAU+		+ 0 6		,,,,,		/RI		+volume	
07			RESEARCH		*NCH	VEHICLE	*		+14		*11-F00T	TRANSO*	H C	ZIMMERLE	*MARCH,	19
7SWT	•	*CENTER L			*		*		*		*NIC WIND	TUNNE*	-DMS		*	
73 7 7			ND TUNNELS		*		*		*		*L (UNITA	RY) *			*	
			O30-SCAL		*		*		*		*8-FOOT B				*	
					.,				*		*OT SUPER				*	
A12A,C			OF THE SP		ı.				·		+WIND TUN				*	
R-128,		*ACE SHUT		*					<u></u>		*NITARY)	*			*	
			2A TO DET		*		· · · ·		1 4		·NIIAKI)	ů.			*	
			AERODYNAMI		*		* ·				σ. 				•	
		*C LOADS		*	*		*		*		*	*			τ ±	
		*		*	*		*		*	,	*	, *	a-1 (F)	C CDANOLE	. D**DIC - DD	-000
RC	-	*RESULTS	OF TESTS	*17-0TS		OBTAIN AERO		RESSURE	* 0 03					IS, SPANGLE		
1 TWT	-	*OA12 AND	D IA9 IN T	*		C LOADS ON 1	LAU+		* 0 6				/RI		*VOLUME	
07	1	*HE AMES	RESEARCH	*	*NCH	VEHICLE	*		*14		*11-FOOT			ZIMMERLE	*MARCH,	197
7SWT		*CENTER L	JNITARY	*	*		*		*		*NIC WIND		-DMS		*	
07			ND TUNNELS	*	*		*		*		+L (UNITA	RY) *			*	
			030-SCAL		*		*		*		*8-F00T B	Y 7-FO*			*	
A12A.C			OF THE SP		*		*		*		*OT SUPER	SONIC *			*	
		*ACE SHU		*	*		*		*		*WIND TUN	NEL (℧*			*	
N 120,			2A TO DET		*		*		*		*NITARY)	*			*	
			AERODYNAMI		*		*		*		*	*			*	
			4EKUD TIVAMI	1 4b	•		*		*		*	*			*	
		*C LOADS		τ	•		*		•		-					

ORIGINAL PAGE IS OF POOR QUALITY

	WIND TUNNEL TE	ST / DMS DATA	PROCESSIN	G		~~~~~~~	11
*	*	*	*MODEL	*	+ CDGNIZANT	* BASIC	
TEST * * CONFIGURAT					* TEST DMS	*PUBLICATI	
ID * REPORT TITLE * TESTED	* PURPOSE	* TEST	*MACH RAN	GE* AGENCY	* PERSONNEL	*OR COMMEN	NTS
- *RESULTS OF TESTS *17-OTS	*TO DBTAIN AER				*GILLENS, SPANGL		
WT - *0A12 AND IA9 IN T*	*AMIC LOADS ON	LAU*	* 0.6 -		*/RI	+VOLUME 15	
/*HE AMES RESEARCH *	*NCH VEHICLE	*	+1 4		*H C ZIMMERLE	+MARCH, 1	19
WT - *CENTER UNITARY *	*	*	*	*NIC WIND TUNNE		*	
/*PLAN WIND TUNNELS*	*	*	*	*L (UNITARY)		*	
A,B,C *ON AN O.O3O-SCAL *	*	*	*	*8-FOOT BY 7-FO	*	*	
2A,C *E MODEL OF THE SP*	*	*	*	*OT SUPERSONIC	*	*	
128,794*ACE SHUTTLE *	*	*	*	*WIND TUNNEL (U	*	*	
*VEHICLE 2A TO DET+	*	*	*	*NITARY)	*	*	
ERMINE AERODYNAMI	*	*	*	*	*	*	
*C LOADS *	*	*	*	*	*	*	
* *	*	*	+	*	*	*	
- *RESULTS OF TESTS *17-OTS	*TO OBTAIN AER	ODYN*PRESSURE	* 0 030	/ *ARC /	*GILLENS, SPANGL		
IT - *0A12 AND IA9 IN T*	*AMIC LOADS ON	LAU*	* 0 6 -	*ARC -		*VOLUME 16	
/*HE AMES RESEARCH *	*NCH VEHICLE	*	*1 4	*11-FOOT TRANSO	+H C. ZIMMERLE	*APRIL, 1	19
VT - *CENTER UNITARY *	*	*	*	*NIC WIND TUNNE	*-DMS	*	
/*PLAN WIND TUNNELS*	* *	*	+	*L (UNITARY)	*	*	
A.B.C *ON AN O O30-SCAL *	*	*	*	*8-FOOT BY 7-FO	*	*	
2A.C *E MODEL OF THE SP*	*	*	*	*OT SUPERSONIC	*	*	
128,794+ACE SHUTTLE *	*	*	*	*WIND TUNNEL (U	*	*	
VEHICLE 2A TO DET	*	*	*	*NITARY)	*	*	
ERMINE AERODYNAMI	*	*	*	*	*	*	
*C LDADS *	*	*	*	*	*	*	
* *	*	*	*	*	*	*	
- *RESULTS OF TESTS *17-OTS	*TO OBTAIN AFE	ONYN*PRESSURE	* 0.030	/ *ARC /	*GILLENS. SPANGL	.ER*DMS-DR-20	03
WT - +OA12 AND IA9 IN T*	*AMIC LOADS OF	I Δ11*	* 0 6 -	*ARC -	*/RI	*VOLUME 17	7
/*HE AMES RESEARCH *	*NCH VEHICLE	*	*1.4		+H C ZIMMERLE	*APRIL. 1	19
WT - +CENTER UNITARY *	*	*	*	*NIC WIND TUNNE		*	
/*PLAN WIND TUNNELS*	*	*	*	*L (UNITARY)		*	
A.B.C +ON AN O.030-SCAL *		*	*	+8-FOOT BY 7-FO		*	
2A.C +E MODEL OF THE SP+		*	*	*OT SUPERSONIC		*	
128.794*ACE SHUTTLE *	*	*	*	*WIND TUNNEL (U		*	1
VEHICLE 2A TO DET	*	*	*	*NITARY)	*	*	
ERMINE AERODYNAMI	*	*	*	*	*	*	
*C LOADS *	*	*	*	*	*	*	
* * *	*	*	*	*	*	*	
, , , ,	•	•					
							1
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	*	*	*		*	*MODEL		,	*	COGNIZANT	* BAS	
TEST	*	* CONFIGURATIONS			* TYPE OF			TESTING	*	TEST DMS		
ID	* REPORT TITLE	* TESTED	*	PURPOSE	* TEST	*MACH	RANGE	AGENCY	·	PERSONNEL	, *UK CUMI	
4.00	*PECH TO OF TEST	47 DTC	******	TAIN AERODYN	+DDECCIDE	* 0 03	n / >	APC /	′ *6	GILLENS, SPANGL	FR*DMS-DR	-203
ARC 11TWT	- *RESULTS OF TESTS - *OA12 AND IA9 IN			LDADS ON LAT		* 0 6		ARC -		'RI	+VOLUME	
707	/*HE AMES RESEARCE		*NCH V		*	*1.4				A. C ZIMMERLE	*MAY.	19
87SWT	- *CENTER UNITARY	•	*	L,1120CC	*	*		NIC WIND			*	
707	/*PLAN WIND TUNNE		*		*	*		L (UNITAR			*	
-	C *ON AN O.030-SCA		•		*	*		8-FOOT BY	•		*	
, _ ,			•		*	*		OT SUPERS			*	
OA 12A, C		*	<u>.</u>		4	*		WIND TUNN			*	
CK-120,	*VEHICLE 2A TO D				•	*		NITARY)	*		*	
	*ERMINE AERODYNAI		*	•	*	*	,	,	*		*	
	*C LOADS	4T.	•		•	*	,	,	*		*	
	* C EGAD3	*	*		*	*	,	•	*		*	
LARC	- *SUPERSONIC STAB	11 +1 0 - 100 DERITER	+SUPER!	SONIC STABIL	*FORCE	* 0 01	/ /	LARC /	*[R STONE/LARC,	B *DMS-DR	-203
UPWT	- *ITY AND CONTROL			HARACTERISTI		*15			· *5	SPENCER/NR	*JULY,	19
995	/*HARACTERISTICS		*CS		*	+4.63	>	UNITARY F	LAN W*F	R. SINGELLTON	*	
1014	/*A LANGLEY CONCE		*		*	*		IND TUNNE	L *-	-DMS	*	
LA4	*T SPACE SHUTTLE		*		*	+	,	*	*		*	
	772*RBITER AT MACH		*		*	*	5	f	*		*	
40,	*5 TO 4 63	*	*		*	*	,	k	*		*	
	*	*	*		*	*	,	•	*		*	
LARC	- *AERODYNAMIC AND	F+DOUBLE DELTA WING	G+LONGI	TUDINAL AND	*FORCE	+ 0 00	4 / 1	LARC /		C WOODS, DAV		-203 19
22HT	- *LOW VISUALIZATION			AL-DIRECTION		*20 3				STONE, JAMES		19
405	/*STUDIES ON A SPA	4 *	*AL CH	ARACTERISTIC	*	*	1	22-INCH F		. ARRINGTON /L	AR*	
LA22	*CE SHUTTLE CONC	EP*	*S, AN	D CONTROL EF	+	*	,	*TUNNEL	*0		*	
CR-128,	764*T WITH A DOUBLE	D*	*FECTI	VENESS AS WE	*	*	,	+	-	J E VAUGHN	*	
	ELTA WING DRBIT	ER	*LL AS	FLOW VISUAL	.*	*	•	•	_	s w brown	*	
	+AT A MACH NUMBE	₹ +	*IZATI	ON STUDIES	+	*	,	r	*-	·DMS	*	
	*OF 20.3	*	+		*	*	*	•	*		*	
	*	*	*		*	+		k	. *_		*	
ARC		IO*THERMAL PROTECTION				5*1 O		ARC /		r F. FOSTER, W		
3.5HWT	- +N SYSTEM GAP HE			HEATING RATE		*5 1		ARC -		J GRIFALL/RI	*APRIL,	15
158	/+ING RATES OF TH	•		IN AND AROU		+5 1				V K LOCKMAN/AI	RG* *	
OH2A	*ROCKWELL INTERN			PS AT THE	*	*		•). A SARVER M M MOSER UR.		
OH2B	*IONAL FLAT PLAT		*TPS		*	*	1	*NEL			* *	
CR-134,	077*HEAT TRANSFER M	DD*	*		*	*	,		*-	-DMS	*	
	*EL	*	*		*	*	,	r	*		*	
	*	*	*		*	*	,	K	*		4	

	·					WIND TUNNE	L TEST /	DMS	S DATA	PROCESS	ING						116
	_	*		+		*		*		*MODEL	·	*		*	COGNIZANT	* BAS1	c c
TEST		*		*	00/11/20110				YPE OF			▶ TESTI		*	TEST DMS	*PUBLICA	
ID		*	REPORT TITL	E *	TESTED	* PURP	OSE	* 7	TEST	*MACH R	ANGE	AGENO	Y	*	PERSONNEL	*OR COMM	
!C }T		*AEI	RODYNAMIC A	ND F*I	ARC LO-100 ORBIT				CE	* 0040	-		1	*DA	VID R. STONE	/N*DMS-DR-	2036
)			W-VISUALIZA			*S OF WING				*20 3		LARC	-		A LARC	*AUGUST,	1973
			UDIES ASSOC WITH VARIA			*AND WING				*			I HELIU		E. POUCHER	*	
			WITH VARIA IN THE GEOM			*EDGE SWEE				+	4	*TUNNEL		*-D	MS	*	
120,						*AT HYPERS	ONIC SPE	*		*	*	k		*		*	
			THE FORWAR TION OF IRR			+EDS	,	*		*	k	k		*		*	
			PLANFORM W			*	,	*		*	*	k		*		*	
			A MACH NUM			*	,	*		+	*	۲		*		*	
			20.3			*	,	*		*	*	۲		*		*	
		*UF	20.3	*		*	,	*		*	*	k		*		*	
			CHITC OF TH	VECTAL	1404 /8 0557755	*	· - · · · · · · · ·	*	_	*	. +	k		*		*	
r	_	* KE 3	SULIS UP IN	VESITI	40A/B ORBITER	*IU DETERM	INE LONG	*FORC	CE	* 0 015			/		ESPARZA /R		
•		* 1 G A	COALE 4404	/D.O.1	40A/B ORBITER WI	I*IIUDINAL	AND LATE	*		+06 -		LTV	-	*WE	LL INTERNATI	ONA*SEPT .	1974
	/	* (5)	SCALE 140A		HOUT VERTICAL TA					*4 6						*	
4	405	*UNF	IGURATION	*]		*TABILITY	AND *	k		*	1	D TUNNE	L		R EMBURY/R		
134,	405	* 522	CE SHUTTLE	VEH*1	40A/B ORBITER WI	*CONTROL C	HARACTER	*		*	*	k		*WE	LL INTERNATI	ONA*	
		*ICL	TE OKRIJEK I	MODE * I	HOUT VERTICAL TA					*	я	k		*L		*	
			(49-0) IN T			*-DATED SS	V CONFIG:	*		*	*	٠			A. SARVER	*	
			4 BY 4-F00	•		*URATION	×	*		*	*	k		*V.	W. SPARKS	*	
			H SPEED WII	ND T*		*	*	k		+	k	k		*-D	MS	*	
		*UNN	1EL	*		*	4	k		*	4	+		*		*	
		*		*		*	*	t		*	4	k		*		*	
٩D			CULTS OF LO			*INVESTIGA			Œ	* 0 040	5 / 4	NR	/	*R	MENNELL, B.	CA*DMS-DR-	2038
Ī			WIND TUNNI			*YNAMIC AN	D PROPUL	k		+0 12 -	*	NRLAD	₩	*ME	RON/ROCKWELL	IN*FEB.,	1974
_			S ON A .040			*SION EFFE				*O 20	*	LOW SPE	ED WIN	D*TE	RNATIONAL	*	
;			E MODEL RO			*ARIOUS AI	R BREATH	*		*	*	TUNNEL		*₺	E. VAUGHN	*	
128,			SPACE SHUT			*ING ENGIN	E SYSTEM	k		*	*	k		ل∗	R. ZILER	*	
			BITER TESTER			*S IN FORC	ED AIR A	۲		*	+	r		*-D	MS	*	0
			IN FREE AI			*ND IN THE	PRESENC	k		*	4	,	1	*		*	Ĭ
			N THE PRESE			*E OF THE	GROUND ×	k		*	+	k		*		*	-
			A GROUND PI	LAN *		*	4	k		*	*	*		*		*	70
		+E		*		*	*	k		+	*	k .		*		*	2
		*		*		*	•	*		*	*	*		*		*	OF POOR
																	ָרֶ ק
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							WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSIN	3					11
							*		*		*MODEI	 L			*	COGNIZANT	* BASIC	
TEST					· ~	ONFIGURATION	 	TEST	*	TYPE OF				TESTING	*	TEST DMS	*PUBLICATE	EON
		.e.	BEDOOT TI	T1 = .			*	PURPOSE	*					AGENCY	*	PERSONNEL	*OR COMMEN	
ID		*	REPORT TI		* 	TESTED												
ISFC	_	+D	CCIII TO OF	MIND T	+M∩D	EL 24 ODRITE	D >net	ERMINE PROXI	MT+F	OPCE	* OO4		/ *	MSFC /	*W	P GARTON /RO	C*DMS-DR-20	239
4TWT	_	- 11	ESULIS OF	AT MAA	* 4 610	EVTEDNIAL TA	NIV + TV	EFFECTS ON T	HE*	01102	*5 0	,		MSFC -	*KW		*MARCH, 1	
71			H 5 ON THE			EXTERNAL IF	* A E D	ODYNAMIC FOR	C *		*5 0					E VAUGHN	*	
		•						AND MOMENTS			*50					T. KAVANAUGH	*	
A6A			CALE MODEL								4				*-D		*	
:R-134,	07		FIGURATION					IENCED BY VE								PIJ	ı.	
			HUTTLE TO					2A CONFIGUR			*						4	
			INE PROXIM					SHUTTLE ORB			*		*	·			*	
		*F	ECTS AND O	RBITER.	+			AND EXTERNAL			*		*		*			
		*C	ONTROL EFF	ECTIVE'	*			DURING AND	AB*		*		*		*		*	
		*N	ESS DURING	ORBIT	*		+ORT	SEPARATION	*		¥		*	•	*		*	
		* E	R/EXTERNAL	TANK	*		*		*		*		+		*		*	
		* A	BORT SEPAR	ATION :	*		*		+		*		*	;	*		*	
		*			*		*		*		*		*		*		*	
ARC	_	*5	UREACE ROLL	GHNESS:	+NΔR	089-B-139 C	RB*SUR	FACE ROUGHNE	SS*F	ORCE	* 0 0	188	/ +	LARC /	∗G :	M. WARE, B SF	'E*DMS-DR-20)40
TPT			FFECTS ON					ECTS ON TRAN			* 35	5 -	*	LARC -	*NC	ER /LARC	*AUGUST, 1	197
43		_	ANSONIC AE			•		C AERODYNAMI			* 1.3	2	*	8-FOOT TRA	NSON+V	W SPARKS	*	
A6		•	ICS OF THE				*	• 45,00	*		*	_		IC PRESSUR			*	
	77										*			NNEL.	*-D		*	
K-128,	11		LL INTERNA												*		*	
		_	89B-139 OR	RIIEK .	*				- A		T -		- T		•		*	
		*_			*		*	NCONTO 45000	7 1141.5	0005	*0.010	`	,	LARC /	*DE	RNARD SPENCER,	.1*DMS~DD~20	04 f
ARC.								NSONIC AEROD		URGE				_ ,				197
ITPT			MIC CHARAC			(SHIPS)	–	C CHARACTERI			*0 35	-		LARC -		/NASA LARC	*061., 1	191
544		/+I	CS ASSOCIA	TED WI	*			ASSOCIATED			+1.2					E. POUCHER	*	
.A7A		* T	H VARIATIO	NS IN :	*		+TH ¹	VARIATIONS I	N *		*			IC PRESSUR	E TU*-D	MS	*	
R-128.	78	1 * T	HE GEOMETR	Y OF T	*		*THE	GEOMETRY OF	T *		*		*	NNEL	*		*	
		*H	E FORWARD	PORTIO:	*		*HE	FORWARD PORT	10*		*		*	•	*		*	
		+N	OF IRREGU	LAR PL	*		*N 0	F IRREGULAR	PL*		*		+	•	*		*	
			NFORM WING		*		*ANF	ORM WINGS	*		*		*	•	*		*	
		*			+		*		*		*		*	1	*		*	
SFC	_	*D	ESILITS OF	FLOW V	*UDB	ITER ALONE	*FLO	W VISUALIZAT	IO*F	ORCE	+0 004	4	/ *	MSFC /	*W.	P GARTON/RI	*DMS-DR-20	342
4TWT						C MODEL NO 4			*		*O 9	-	*	MSFC -	*J.	E VAUGHN	*MARCH, 1	197
			SOALIZATIO ES IN THE			0 MODEL 140 -	,,,,,,	100100	*		∗ 5 0		*	14-INCH TR	ISON*-D	MS	*	
84											*			IC WIND TU			*	
A52	~~	-	FC 14 X 14				→		- Tr		*				*		*	
K-134,	OB		RISONIC WI				T.		т -					•	*		*	
			EL ON A O				*		*		·Γ						· *	
		_	E MODEL (3				*		*		▼		*		*		···	
			ACE SHUTTL				*		*		*		*	i	↑			
		* T	ER AND INT	EGRATE	*		*		*		4		*	t .	*		.t.	
		*D	VEHICLE	,	*		*		*		*		*	•	*		*	
		+			+		*		+		*		*	•	*		*	

	118				SING	PROCESS	DMS DATA	TEST /	IND TUNNEL	W						
	* BASIC	COGNIZANT	· *	*		+MODEL		*		, *		+			+	
	*PUBLICATIONS	TEST DMS	ESTING *	* TE	SCALE*	+ S	TYPE OF	* T	TES	SURATIONS *	CONFIG	*			*	TEST
	*OR COMMENTS	PERSONNEL	GENCY *	* AG	RANGE+	*MACH R	TEST	ISE *	PURPO	STED *	TE	*	TITLE	REPORT	*	ID
										·						
	_A*DMS-DR-2043	C B. JOHNSON /	c / *	*LARC	/ ;	s+1 00	HEAT-TRANS	FER DAT*I	HEAT TRANS	S.ORBITER*	RSI TILE	DAT*	NSFER	AT TRA	- +)4	ARC
!	*JUNE, 1973	RC	C - ×	+LARC	- 1	*80 -			A FOR RSI				ITIES			VDHT
	*	W. M HALE	H 8 VARIABL	*MACH	4	*		*	.,	k .			ULATED			24
	*	-DMS	ENSITY HYPE	*E-DE	á	*		*		4			AT MAC			A 16
	*		NIC TUNNEL *	*RSON	4	*		*		, *		*	A 1 11/4 U			R-128,
	*		,	*		*		*		4		*			*	120,
	/R*DMS-DR-2044	MORRIS D MILAN	/ ,	*ARC	1.	*.015	FORCE	LONGITU*	DETERMINE	ORBITER 2*	SHITTLE	FCT*	OF TAN	ST 1112	- +D	RC
1	*OCT., 1973	OCKWELL	•	+ARC	•	*5.27 -			DINAL AND				ON A			
		JACK A MELLENT				*7 32			-DIRECTION				MODEL	– – –		57
	*		IC WIND TUN			*		*	ILITY				ATION			57 A11A
	*	B. J. FRICKEN		*NEL		*			ESTABLISH				WELL I			
	*	-DMS		*		*		TRIM OA*	PABILITY				AL SPA			K~128
	*	200		+					LADILITI				ORBITE			
	*			, •		*		, , , , , , , , , , , , , , , , , , ,		4			-		_	
	*				•	·				₹			SA/AME			
	*			- -		* *		*		Я			CENTER			
	•			4		*		* .		74		MIC*	YPERSO		_	
	*			*		*		*		**		*	NEL	ND TUN	*W	
	*DMS-DR-2045	D G WALSTAD /NE	,	+ND	·= /	*O 0405	ronor	* *!***********	COTAIN CIL	TOU DDDT:		*	****		*	
0	*DMS-DR-2045 *SEPT., 1973 *	D E POUCHER			- ,	*0 16 -				_ SSV ORBI						RLAD
71	*		SPEED WIND			*O 26			ENT FORCE		IER	•	(DA 18	-		SWT
		-UN3		*TUNN		*U 26		IINGE MU*	D ELEVON F				O5 SCA			04
POOR	*		INCL.	* ! ())/()		*		*	MENT DATA	*			THE 2			A 18
ŏ	*			*		*		*		*			CE SHU			R-128
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Q	*			*		+		*		×			ICAN A			
<u>_</u>	ate.	•		*		۴		*		4			LABOR			
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	*			*		*		*		y.		*	16	AND (*2	
	*			+		*		*		k		*			+	
	.J*DMS-DR-2046		•	*LARC		* 0 01	FORCE	AERODYN*	TRANSONIC	-100 ORBIT	LARC LO-	ABI*	MIC ST	RODYNA	- +A	ARC
5	*AUGUST, 1973	R /NASA LARC		*LARC		*O 35 -		ORMANCE,*	AMIC PERFO	ý	ER	10°C	CONTR	ETY AND	- *L	TPT
	*	D E. POUCHER				*1.2		AND CON*	STABILITY	y		S 0*	RISTIC	HARACTE	/*0	48
	*	-DMS	PRESSURE TU			*		CONTROL *	TROL AND C			NCE*	LEY CO	A LANG	*F	A 17
	*		L	*NNEL		*		VESS *	EFFECTIVEN	ý		LE *	SHUTT	SPACE	776*P	R-128
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	*			*		*		*	•	1			NUMBER			
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						4.								- '	•	

			WIND TUNNEL TES	T / DMS DATA	PROCES	SING				.	119	
	*	*	*	*	*MODEL	*		*	COGNIZANT	* B	ASIC	
TEST	*	* CONFIGURATION	IS * TEST	* TYPE OF	*	SCALE*	TESTING	*	TEST DMS	*PUBL	ICATIONS	
ID	* REPORT TITLE	* TESTED	+ PURPOSE	* TEST	*MACH	RANGE *	AGENCY	*	PERSONNEL	*OR C	OMMENTS	
	- *EFFECT OF WALL	TOWOADA CDACE CHILT	T1 +10	*HEAT-TRAN	s* 006	/ *	LARC /	*.1.	C DUNAVANT/L	A*DMS~	DR-2047	
	- *TOTAL TEMPERATU			*	* 10		LARC -	*RC			. 1974	
	/*E RATIO VARIATI		1 " 	•	* 10		CONTINUOUS-FL			*	•	
98	•		* •	Τ 	*		W HYPERSONIC					
LA31	*ON HEAT TRANSFE	к *	*	*	4		UNNEL	1 "				
CR-134,0)86*	*	*	*	*	*				*		
	*	*	*	* - **=000E	*0 019		ARC /	.π.D. I	B HARDIN, R.	*DMC-	DP-2048	
	- *WIND TUNNEL TES		IN *10 UBIAIN FURC	E A*FURUE		•	ARC -		BURROWS /ROCK			
	- +OF THE 0.019 (2		*ND MOMENT DATA		*1 55		9-FOOT BY 7-F			·π-00-1	, 13/4	
710	/+CONFIGURATION)		+ING PRESS. DIS	•	••		OT SUPERSONIC			· •		
IA12B	*T PLUME SPACE S		*ELEVON AND RUD		*					, ~		_
CR-134,1	104+TTLE INTEGRATED		*BENDING MOMENT	-	*		WIND TUNNEL (Ç
	+EHICLE IN THE A		+AND DETERMINE		*		NITARY)	*-DM:	5	TF.		ă
	*9- BY 7-FOOT UN		*ECT OF SRM AND		*	*		*		- T-		7
	*TARY WIND TUNNE	L *	*S PLUMES, SRM		*	*		**		*		אָטטאָ אָטטאָ
	*	*	*ORB NOZZLE GI		*	*		*		*		Ĉ
	*	*	*AL ANGLES, AND	\$R*	*	*		*		*		Z
	*	*	*M SHROUDS OFF	*	*	*		*		*		_
	*	*	*	*	*	. *		*	//	*		Q
LARC	- *AERODYNAMIC HEA	TI*NR 2A ORBITER	*DETERMINATION	OF *FORCE	+ 006		LARC /		GOROWITZ/ROCK			سا
8VDHT	- *NG OF A SPACE S	HU*	*HEATING EFFECT	S F*	*8.0		LARC ~	*ELL		*JULY	. 1973	
3619/367	O/*TTLE DOUBLE DEL	TA*	OR LAMINAR THR	OUG+	*		MACH 8 VARIAB			*		
0H40	*WING ORBITER	*	*H TURBULENT FL	IGH*	*		E-DENSITY HYP			*		7
CR-128.7	771+AT MACH NUMBER	8.*	*T REGIMES DURI	NG +	*	+	RSONIC TUNNEL	*-DM	S	*		
	*0	*	*REENTRY	*	*	*		*		*		
	*	*	+	*	*	*		*		*		
ARC	- +WIND TUNNEL TES	T +ROCKWELL SSV 2A	O*LONGITUDINAL A	ND ⊁FORCE	*0 015	/ +	ARC /		D MILAM, T			
	- +OF THE 0.15-SCA		*LATERAL-DIRECT	ION*	+0 6		ARC ~		ZIUBALA /RI -		, 1973	
706	/*ROCKWELL INTERN		*AL CHARACTERIS	TIC*	*2.0		6-FOOT BY 6-F					
DA43	*TIONAL SPACE SH		*S. RUDDER AND	ELE*	*	*	OT SUPERSONIC			/*		
	790*TLE VEHICLE ORB		*VON HINGE MOME		*	*	WIND TUNNEL	*ARO		*		
U. 12U, /	+ER IN THE AMES		*	*	*	*		*M	J. LANFRANCO	*		
	*BY 6-FOOT SUPER		*	*	*	*		*S	W BROWN	*		
	*ONIC WIND TUNNE		*	*	*	*		*-DM	S	*		
	"CIATO MIND LOIMAE	· La	: -					*		u.		

OF POOR	
QUALITY	PAGE W.

					WIN	D TUNNEL TE	ST / D	MS DATA	PROCESS	ING						12
		*	*		*		*		*MODEL	,	 *		*	COGNIZANT	* BAS	itc
TEST		*	*	CONFIGURA	TIONS *	TEST	*	TYPE OF			* TESTI	NG		TEST DMS		
ID		* REPORT	TITLE *	TESTE		PURPOSE	*	TEST			* AGENC			PERSONNEL	*OR COM	
						~										
FC	_	* 4 F D O D V N A M	TO CHADA+	BOOSTER MSF	C NUDE+TO	ORTAIN FOR	OE 4=E0	nor	** 0056	n / .	HCCO	,		. ICHNICON/	ACEADNO DD	
TWT		*CTERISTIC	S OF A 1*	L NO 449	C MODE*10	MUMENT DAT	ሁፎ ል≁ዮሁ ለ ፓጠቀ	RGE	*0 0056 *0 6 -		MSFC	_) JOHNSON/I	NU-SMU*+3N AUGUST*	
2	/	*42-INCH D	IAMETER *	L 110 445		PUT IN COMP			*3 48					. RADFORD/		, 19
5F		*SOLID ROCK				PROGRAM TO			13 46 ¥						421.↓	
		*TER (CONF							*		*IC MINO	IUNNE		SPARKS	*	
120,		*NS 89B AN				INE THE RAT			*		*			POUCHER	*	
		* *142 020 ¥181	139) *			CELERATION			*	,	*		*-DMS	i .	*	
		≁ •	# 			E ATTITUDE			*	`	*		*		*	
•		 	*			E SRB'S DUR	ING *		*		,		*		*	
			*			EE-FALL	*		*	3	*		*		*	
RC .	_	T WELIDEDOOMT	* · '''''''''	10 400 0004	*		*		*	_ , '	*	,	*		*	
₩T	_	*SUPERSUNI	. AERUUY*	LO-100 ORB(SHIPS) * LF	ECTS OF GE	UMET*FO	RCE	*0.0187	•		/		S STONE, P		
	Ξ,	TNAMIC CHA	KACIERIS*	(BW2VFB)	*84	ON SUPERSO	NIC *		* 2 36-		+LARC	-		CER/LARC	*NOV.,	19
15		*TICS ASSO				RODYNAMIC C			* 4.63					V SPARKS	*	
10		*ITH VARIA				ERISTICS ON	PLA*		*	,	FIND TUN	NET		√ MYERS	*	
-128,		THE GEOME			*NF	DRM WINGS	*		*	,	*		*-DMS	3	*	
		*HE FORWARD			*		*		*	,	k		*		*	
		*N OF IRREC	– –		*		*		*	3	*		*		*	
		*ANFORM WIN	√GS +		*		*		*	3	۲		*		*	
		* . 	*		*		*		*		*	_	*		*	
LAD		*EXPERIMEN	-			VESTIGATE T		RCE	* 0 040			/		. CAMERON		
AT.		*STIGATION:				GITUDINAL A			*		*NRLAD	-		J. RITSCHEL	•	
5		+0.0405 SC/				ERAL-DIRECT			*			ED WIN	D*ROC!	KWELL INTERI	VA *DEC.,	19
21B		*E SHUTTLE	*		*L :	SUBSONIC AE	RODY*		*	•	*TUNNEL		*TI0	NAL	*	
-128,		*CONFIGURAT			*NAI	MIC CHARACT	ERIS*		*	,	*		*D. /	SARVER	*	
		*RBITER TO			*TI	CS OF THE RI	DCKW*		*	,	*		*B 1	/ MYERS	*	
		NE SUBSON:	IC STABI		*EL	L INTERNATI	DNAL*		*	,	*		* - DMS	3	*	
		*LITY	*		*PR(OPOSED PRR	*		*	3	+		*		*	
		CHARACTER	(STICS		*SP/	ACE SHUTTLE	ORB*		*	•	*		*		*	
		+OA21)	*		* I T	ER	*		*	,	*		*		*	
		+	*		*		*		*	,	*		*		*	
_AD		*EXPERIMENT			*IN	/ESTIGATE TI	HE L∗FO	RCE	* 0 040	5 / 🤈	*NR	/	*B. \	CAMERON A	AND*DMS~DR	~205
√T		*STIGATIONS			*ON0	SITUDINAL A	ND L*		*	,	*NRLAD	-	*A (J. RITSCHEL	/ *VOLUME	02
5	- #	*0.0405 SC/	ALE SPAC*		* AT1	ERAL-DIRECT	I DNA *		*	,	*LOW SPE	ED WIN	D*ROCK	WELL INTER	VA ∗FEB.,	19
2.1B		*E SHUTTLE	*		*L :	SUBSONIC AE	RODY*		*	,	*TUNNEL		*TI01	NAL	*	
- 128 ,		*CONFIGURAT			*NAI	MIC CHARACT	ERIS*		*	,	*		*D /	SARVER	*	
		*RBITER TO			*TI	CS OF THE R	DCKW*		*	,	*		*B. \	MYERS	*	
		NE SUBSON	C STABI*		*EL1	L INTERNATION	DNAL*		*	,	+		*-DMS	3	*	
		*LTTY	+		*PR(POSED PRR	*		*	,	+		*		*	
	,	*CHARACTER	STICS (*		*SP/	ACE SHUTTLE	ORB*		4		*		*		+	
		+OA21)	*		+171		*		*	1	¥		*		*	
		+														

					WIND	TUNNEL TEST	г / Ц	DMS DATA	PROCES	SSING						12
	·		*		*		*		*MODE1		*		*	COGNIZANT	* BAS	IC
TEST	*		* (CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCAL	E* TESTI	٧G	*	TEST DMS	*PUBLICA	ATION:
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE		TEST	*MACH		E* AGENC		*	PERSONNEL	*OR COM	MENTS
ARC.	- *5	URFACE ROUGHNES	S+NR	DRBITER	*T0 1	DETERMINE TH	4E *F	DRCE	* 0 18	38 /	*LARC	1		WARE , BEF		
IPWT		FFECTSON THE SU			*EFF	ECTS OF SURF	AC*		+16	-	*LARC	-		SPENCER JR	/L*NOV ,	197
023/103	34/+P	ERSONIC AERODYN	A +		*E R	DUGHNESS ON	TH*		*4 63		*UNITARY				*	
ABA	*M	ICS OF THE ROCK	W*		*E 0	RBITER AEROL	*NYC		*		*IND TUN	NEL		E VAUGHN	*	
ASB	* W	ELL INTERNATION	Α*		+AMI	C CHARACTERI	(ST*		*		*		_	W. MYERS	*	
		089B-139 ORBIT			+ICS	OVER COMPLE	TE*		*		*		* - Di	VS .	*	
	*R		*		+MAC	H RANGE	*		*		*		*		*	
	*		*		*		*		*		*		*		*	
SFC	- *5	TATIC STABILITY	*ORE	SITER 139	*T0	DETERMINE TH	4E *F	DRCE	+0 004	1 /	*MSFC	/	*E (C. ALLEN/ROCH	<pre><we*dms-dr·< pre=""></we*dms-dr·<></pre>	-2055
4TWT		ND CONTROL EFFE				TIC STABILIT			+ 6	-	*MSFC	-	*LL		*V0LUME	01
74		IVENESS OF MODE				CONTROL EFF			* 4 96	3	+14-INCH	TRISC	N*TE	RRY TUTTLE/RO	CK*SEPT ,	197
448		12-0 AND 34-0			,	ENESS OF MOD			*	='	*IC WIND	TUNNE	L*WEI	L i.	*	
	-	F THE VEHICLE 3				O AND 34-0	*		*		*		*V	W SPARKS	*	
120,	-	ONFIGURATIONS	*		*	O AND ON O	*		*		*		*B.	J FRICKEN	*	
		DINI I GURA I I DIVI	•		*		*		*		*		*-D!		*	
	T.				*		*		*		*		*		*	
***		TATIC STABILITY	* O D E	21TED 420	*TO 1	DETERMINE TH	4E *F	DRCE	+0 004	1 /	*MSFC	/	*E (C. ALLEN/ROCK	<pre><we*dms-dr-< pre=""></we*dms-dr-<></pre>	-2055
SFC 4TWT		ND CONTROL EFFE				TIC STABILIT		SKOL	* .6		*MSFC	<u>-</u>	*LL		*VOLUME	
		IVENESS OF MODE		311EK 1990		CONTROL EFF			* 4.98			TRISC		RRY TUTTLE/RO	CK*SEPT .	197
74						ENESS OF MOD			*	•	*IC WIND				*	
448	_	12-0 AND 34-0				O AND 34-0	*				* 10 11110	. 0, 1112		W SPARKS	*	
R-128,7		F THE VEHICLE 3			* 12-1	U AND 34-0	т Т		r s					J FRICKEN	*	
	*0	ONFIGURATIONS	*		*	•			1		τ •		*-DI	•	*	
	*		*		*				4		* •		- Di	"3	*	
	*_		*		*		* · · · · ·	222	***	. ,	*MSFC	,	, E (C. ALLEN/ROCK	/!!E +DMS -FID.	-2055
SFC	-	TATIC STABILITY				DETERMINE TH		DRCE	+0.004			/	*LL	•	*VOLUME	
4TWT		ND CONTROL EFFE		BITER 139B		TIC STABILIT			* .6		*MSFC	TOTO		RRY TUTTLE/RO		-
74	,	IVENESS OF MODE				CONTROL EFF			* 4.90	9	*14-INCH *IC WIND				JUK*110V ,	197
A48		12-0 AND 34-0				ENESS OF MOD	JEL*		*		*IC MIND	LOWING			- L	
R-128,7		F THE VEHICLE 3	*		*12-	0 AND 34-0	*		*		*			W SPARKS		
	*C	ONFIGURATIONS	*		*		*		*		*		-	J FRICKEN	*	
	*	-	*		*		*		*		*		*-D!	MP	**	
	*		*		*		+		*		*	,	*	44 14400 4510	*	0050
ARC	- *S	URFACE ROUGHNES	S*NAF	R 089B-MOD NO:				DRCE	+0 018	375 /	*LARC	/		M WARE AND		
TPT		FFECTS ON THE S				ECTS ON TRAN			*		*LARC	- 		ARD SPENCER.		1973
30/135	/*U	BSONIC AERODYNA	M+NAF	R 0898-MOD NO:	E*ONI	C AERODYNAMI	ICS*		*		*LOW-TUR				*	
A9		CS OF THE	* *		*		*		*			E TUNN		D. MILAM/ROG		
R-128.7	782*R	OCKWELL INTERNA	*T		*		*		*		*EL			L INTERNATION	VAL*	
•	* I	ONAL 0898-139 C	R*		*		*		*		*			E VAUGHN	*	
	*B	ITER	*		*		*		*		*			W MYERS	*	
	*	•	+		*		*		*		+		*-DI	MS	*	
													*		.4.	

					WIND	TUNNEL TES	T /	DMS DATA	PROCES	SING					12
	*		*		*				*MODEL		*				
TES	T *		* (CONFIGURATIONS	*	TEST	*	TYPE OF			* * TESTING	*	CDGNIZANT		BASIC
ID	* F	REPORT TITLE	*	TESTED	*	PURPOSE	*		*MACH			*	, = 0 . 5 5		BLICATION
							~		***************	KANGE	AGENCT	. .	PERSONNEL	*UR	COMMENTS
LARC	- *RES	SULTS OF AN EX	(P+ORE	BITER, MODIFIED	*STAB	. AND CONTRI	0L *F	ORCE	* 0	015/	*LARC /	*\	ESPARZA,M.	MTI *DM	S-DD-2057
UPWT	- +ERI	(MENTAL AEROD)	/N*2A,			S OF CONF			* 2 5		+LARC -		M /ROCKWELL		V . 197
1035		[C INVESTIGAT]				AND ALT			* 4 6				. SINGELLTON	* 140	V , 157
OA44	*N 1	TO OBTAIN STAT	ΓI*		*EBOD	Y	*		*		+IND TUNNEL		DMS	*	
CR-134		STABILITY AND			*		*		*		*	*		*	
		FROL CHARACTE			+		*		*		*	*		*	
	*ST1	ICS OF THE SSI	/ *		*		*		*		*	*		*	
		VFIGURATIONS 2			*		*		*		*	*			
		_70-000089B) M			*		+		*		*	*		*	
		. 1 AND 3 (VL)			*		*		*		*	*		*	
		00139B) MODEL			*		*		*		*	*		*	
	*ORE	BITERS AT MACH	*		*		*		*		*	*		*	
	*NUN	MBERS OF 2.5,	3+		*		*		*		*	*		*	
		, AND 4 6 IN 1			*		*		*		*	*		*	
		JASA LARC 4X4-			*		*		*		*	*		*	
	+001	' UPWT (0A44)	+		*		*		*		*	*		*	
	*		*		*		*		*		*	*		*	
LARC	- *RES	SULTS OF THE C). *ORB	ITER NAR VL70-	*OBTA	IN GENERAL	ST*F	ORCE	* 0.01	5 /	*LARC /	*B	ERNARD SPENCE	R J∗DM	S-DR-2058
LTPT	- +015	SCALE SPACE	\$*000			ITY AND COM			*0 25	-	+LARC -		. AND JAMES		
138_	/+HUT	TLE VEHICLE O	R*		*OL CI	HARACTERIS	LIC+		*		*LOW-TURBULE		ON /NASA LAR		
DA 17	+BIT	ER TEST (OA17	')*		* S		+		*				E POUCHER	*	
CR-134		THE NASA LOW			*		*		*		*EL		DMS	*	
		BULENCE PRESSU	IR+		*		*		*		*	*		*	
	*E T	UNNEL	*		*		*		*		*	*		*	
	+		*		*		*		*		*	*		*	
ARC	- *INV	ESTIGATIONS O	F*ORB	ITER 2A	*DETEI	RMINE THE F	OR+F6	DRCE	*0.015	1	+ARC /	*M	I. D MILAM A	Jn M∗nM	S-DP-2059
	- *THE	SPACE SHUTTL	*		*CE. I	MOMENT. AND) H*		*5 O	•	*ARC -	*	E NICHOLS/	SUCK*III	NE. 1974
160		RBITER 2A CON	lF∗			MOMENT CHA			*7 O			PFR*W	ELL INTERNAT	I DOMA *	157
OA 1 1B		RATION	+			ISTICS	*		*		*SONIC WIND			*	
CR-128,		15-SCALE MODE			*OF C	ONFIGURATIO	3N *		*		*NEL		. A MELLENTA	ITN *	
	*IN	THE NASA AMES	+		*2A SI	PACE SHUTTL	.E +		*		*		ND J CLEARY		
	*RES	EARCH CENTER	*			CLE ORBITER			*		*		AMES RESEAR		
	+3.5	-FOOT	*		*T MAG	CH	*		*		*		NTER	*	
		ERSONIC WIND			+NUMB	ERS 5, 7, #	ND*		*		*		. W MYERS	*	
	*UNN	EL AT MACH NU	M+		* 10	, ,	+		*		*		DMS	*	
	*BER	S 5, 7 AND 10	*		*		*		*		*	*	# P. 1-0	*	
	*		*		*		*		*		*	*		*	

						WIND	TUNNEL TI	EST / C	MS DATA	PROCES	SING								123
				*		*		*		*MODEL		*		*	cae	NIZANT	*	BASI	3
TEST	· *			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TEST	ING	*	TEST	r DMS	*PU	BLICA	FIONS
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGEN	ICY	*	PER	RSONNEL	*0R 	COMMI	ENTS
													•						
ARÇ					RBITER 3,A		RAL STAB		DRCE			*ARC *ARC	/			DZIUBALA CLEARY/N			1974
3 5HWT		DYNAMIC					CONTROL			*5.3		+3 5-FC	OT U			, CEAR : / I	A DA + OO	114.	1374
163		MOMENT					RISTICS			*10 3		+SONIC				AVEDS	*		
0A58		TION OF					GURATION			.		+NEL	MIND	*-D		41 CKS	*		
CR-134,		SCALE C					ALTERNATI	E VEH*		τ υ		*		*	1113		*		
		ON 3 SP.				*ICLE	:5	Ţ		T.		*		*			*		
		E ORBIT				** 		4 -		T 1		*		**			*		
		IASA/ARC				*		*		*		*		*			*		
		HYPERS		איטוו		* _				*		*		*			*		
	* 1	UNNEL (UASS)	-1-		т ъ		*		*		*		*			*		
NRLAD	c	HIEGNITO	TOANIC	ብእነቱኒ፣	/L70-000139B (M0	D*CTVE	TETTY AND	n con*fi	IRCE	+0.015	. /	*NR	1	*R	C A	MENNELL	/RI*DM	S-DR-	2061
7TWT	- 42 - 47	C VND	, IKANS	MT + E	L ND 42-0)	U-SIAL TDOI	CHARACTI	FRIST*	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	* 6	•	+NRLAD	<u> </u>			SARVER		C,	1973
276					L70-000147B (MQ		. 0,1,4,1,4,01,	*		*3.0		+7-F001	TRI	SONI * - D	MS		*		
DA68					L ND 49-0)	*		*		*		+C WINE	TUNI	NEL *			*		
		STICS O			110 45 0)	*		*		*		*		*			*		
01. 120.		B SPACE				*		*		*		*		*			*		
		RBITER	51.01.12	*		*		, *		*		*		*			*		
	*	, no x r c n		*		*		+		*		*		*			*		
AEDC	- +4	FRODYNA	MIC RES	UL*I	NTEGRATED VEHIC	L*SEPA	RATION T	EST O+		*0 01	/	*ROCKWE	ELL/			MPBELL			
SWTA	- *1	S OF A	SEPARAT	10*E	CONFIG 3 (MODE	L*F SF	B FROM E	r and*		*4.5	-	*AEDC	-	-		/AUGHN	• -	LUME (
VA323		FFFECT					ROM ORB			*		+SUPERS	SONIC			MOSER JA	₹. *AU	GUST.	1975
IA13		UUCTED		*	•	*NG C	APTIVE TE	RAJEC*		*		*D TUNN	1EL (,	A) *-D	MS		*		
		EDC 40X		H *		*TORY	SYSTEM	*		*		*		*			*		
		UNNEL A				*		*		*		*		*			*		
		N THE R				*		*		*		*		*			*		
	*1	NTERNAT	IONAL	*		*		*		*		+		*			*		
	* L	AUNCH C	ONF I GUR	*TA		*		*		*		*		*			*		
	*]	ON 3 IN	TEGRATE	D *		*		*		*		*		*			**		
	*/	/EHICLE		*		*		*		*		*		*			*		
	*			*		*		*		*		*		*			*		

						WIND	TUNNEL TEST	/ [MS DATA	PROCES	SSING					12
TEST	*			*		+	~~~~	*		*MODE!	_	*	*	COGNIZANT	* BASIC	
ID	*	REP	ORT TITE	.E *	CONFIGURATIONS TESTED	*	TEST PURPOSE	*	TYPE OF TEST		SCALE:	. = =	* *	TEST DMS PERSONNEL	*PUBLICAT *OR COMME	
DC					NTEGRATED VEHICL				RCE	*0 01				K CAMPBELL/RI		
Α					CONFIG 3 (MODE					*4 5				E. VAUGHN	*AOFRWE C	
23					· · • •		ROM ORB. US	_		*		*SUPERSONIC WIN			*AUGUST,	197
3			ED IN TH				APTIVE TRAJ	_		*	;	*D TUNNEL (A)	*-DM	S	*	
134,			X 40 IN			*TORY	SYSTEM	*		*	;	*	*		*	
			A FACIL	•		*		*		+	,	*	*		*	
			E ROCKWE			*		*		*	,	*	*		*	
			ATIONAL			*		*		*	,	*	*		*	
			NFIGURAT			*		*		*	,	*	*		*	
			EGRATED	VEHI *		*		*		+	:	*	*		*	
	*	CLE		*		*		*		*	;	*	*		*	
_	*			*		*		*		*		*	*		*	
Ċ					NTEGRATED VEHICL				DRCE	*0 01	•	*ROCKWELL/		K CAMPBELL/RI		
A					CONFIG 3 (MODE	_	-			*4.5		*AEDC -	-	e vaughn	*AOLUME C	
23					•		ROM ORB. US			*		*SUPERSONIC WIN			*AUGUST,	197
3			ED IN TH			*NG C	APTIVE TRAJ	EC*		*		*D TUNNEL (A)	*-DM	S	*	
141,			X 40 IN			*		*		*	;	*	*		*	
			A FACIL			*		*		*	:	*	*		*	
			E ROCKWE			*		*		*	,	*	*		*	
	*	NTERN	ATIONAL	LAUN*		*		*		*		*	*		*	
	*	CH CO	NF I GURAT	10N *		*		*		*		*	*		*	
	*	3 INT	EGRATED	VEHI*		*		*		*		*	*		*	
	*	CLE		*		*		*		*		*	*		*	
	*			*		*		*		*	,	*	*		*	
C	- *	RESUL	TS OF TE	STS *I	NTEGRATED VEHICL	*STAT	IC STABILIT	Y.*FC	DRCE	+0.00	4 /	*MSFC /	*E	C. ALLEN, T. I	++DMS-DR-2	2063
WT	- *	IN TH	E MSFC 1	4X14*E		*INTE	RFERENCE EF	F *		+0.6	- :	*MSFC -	*AMI	LTON /ROCKWELI	L*NOV.,	197
/580	/*	INCH	TRISONIC	WI *		*ECTS		*		*4 96		*14-INCH TRISON	1+U	E. VAUGHN	*	
7	*	ND TU	NNEL ON	* A		*		*		*		+IC WIND TUNNEL	.*A.	T KAVANAUGH	*	
8	*	004 S	CALE MOD	EL 0*		*		*		*		*	*-DM	S	*	
128,	788*	F THE	ROCKWEL	L IN+		*		*		*		*	*		*	
	+	TERNA	TIONAL S	PACE*		*		*		*		*	*		*	_
			LE VEHIC			*		*		*		*	*		*	7
			NTEGRATE			*		*		*		*	*		*	-
			RATION)	*		*		*		*		*	*		*	7
	*		,	*		*		*		*		*	*		*	5
																OF FOOS
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																Ş
																;

					WIND TU	NNEL TE	st /	DMS DATA	PROCES	SSING			_			125
	+		 *		*		 *		*MODE!	 -	*		* (COGNI ZANT	* BAS	.c
TEST	*		+ CON	FIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTI	NG		EST DMS	*PUBLIC	
ID		REPORT TITLE	*	TESTED	* P!	URPOSE	*	TEST	*MACH	RANGE	+ AGENC	Y 	* 1	PERSONNEL	*OR COM	MENTS
CALSPAN 8TWT T14-053 IA36 CR-141. CALSPAN 8TWT T14-053 IA36 CR-141, ARC 87SWT 710 IA12C	* WOE TOU WOE TOU WOE TO WOE T	IND TUNNEL TEST THE O 019 SCAL SPACE SHUTTLE I TEGRATED VEHICLE TODEL 14-OTS) IN TE CALSPAN 8-FO TRANSONIC WIND INNEL (1A36) TOTAL TEST SPACE SHUTTLE I TEGRATED VEHICLE TODEL 14-OTS) IN TECALSPAN 8-FO TRANSONIC WIND JUNEL (1A36) TOTAL TEST AN O 019-SCAL SPACE SHUTTLE I TEGRATED VEHICLE SPACE SHUTTLE I TEGRATED VEHICLE TOTAL TESTS TOTAL TEST	* G * EG *	TESTED	* PP *MPS NO* *RE LOA! *RE LOA! *LEVON, *HINGE PP *TRIBUT *YNAMIC *AND CO* *MPS NO* *MPS NO* *HINGE PP **TRIBUT **MPS NO* *HINGE PP **TRIBUT	URPOSE ZZLE PRI AND RUI MOMENTS RESSURE IONS, AI STABIL NTROL ZZLE PRI AND RUI MOMENTS RESSURE IONS, AI STABIL NTROL ZIE PRI ON LO DET GN ON LO ED WING ST, ORI ET GN ON LO ED WING ST, ORI EXTERNAL IST., AI ASE PREI	* - PF * *** * * * * * * * * * * * * * * * *	TEST RESSURE ORCE RESSURE ORCE ORCE	* *MACH *0 019 *1 2 * * * * * * * * * * * * * * * * * * *	SCALE RANGE	* TESTIE + AGENCY *CALSPAN *NR *CALSPAN **IC WIND * + CALSPAN +NR +CALSPAN +NR +CALSPAN *NIC WIND * * * * *ARC *ARC *8-FOOT	NG Y TRANSON TUNNEL TRANSON TUNNEL TRANSON TUNNEL ORSONIC NNEL (U	**- **+ *** * * * * * * * * * * * * * *	EST DMS PERSONNEL HARDIN, R URROWS /ROCI N A STRI I /CALSPAN SARVER ZIMMERLE HARDIN, R URROWS /ROCI N A STRI I /CALSPAN SARVER ZIMMERLE HARDIN, R URROWS /ROCI I /CALSPAN SARVER ZIMMERLE HARDIN, R URROWS /ROCI INTERNATION GUIST /NAS	*PUBLIC *OR COMI *OR COMI *OR COMI *DMS-DR (W*VOLUME JZ*DEC , * * ** ** ** ** ** ** ** ** ** ** ** *	-2064 01 1975 -2064 02 1975 -2065 01 1975
875WT 710	- *OF	F AN O O19-SCAL SPACE SHUTTLE I	*		*OF COL		AS *P	RESSURE	*2 50 *3 50		*ARC	· -	*BURR	OWS/RI GUIST/NASA	*VOLUME	02
710 IA120	•	SPACE SHOTTLE I				-DIR C			*		+OT SUPE	RSONIC	*MES		*	
		THE NASA AMES				ED WING			+					FRICKEN	*	
	*8	X 7-FOOT UNITA	*			, WING			+		*NITARY)		*-DMS		*	
		WIND TUNNEL(IA	*			ST.,ORB			*		*		*		*	
	* 12	2C)	*			TERNAL !			*		*		*		*	
	*		*			ST ,AND E PRESS			*		*		*		*	
	*		4		TEL DAS	r LVE22			*							

	/		
	WIND TUNNEL TEST / DMS	DATA PROCESSING	126
* * CONFIGURATIONS		*MODEL * PE OF * SCALE* TESTING	* COGNIZANT * BASIC * TEST DMS *PUBLICATIONS
ID * REPORT TITLE * TESTED	* PURPOSE * T	EST +MACH RANGE* AGENCY	* PERSONNEL *OR COMMENTS
ARC - *WIND TUNNEL TESTS*2A CONFIGURATION	*DETERMINE EFFECTS*FORC	E *0.019 / +ARC /	*R B HARDIN, R.R *DMS-DR-2065
87SWT - *OF AN O 019-SCAL *	*OF COLD JET GAS *PRES	SURE *2 50 - *ARC -	*BURROWS/RI *VOLUME 03
710 /*E SPACE SHUTTLE I*	*PLUMES ON LONG. A*	+3.50 *8-F00T BY 7	-FO*L R.GUIST/NASA AM*APRIL, 1975
IA12C *NTEGRATED VEHICLE*	*ND LAT-DIR. CHAR *	* *OT SUPERSON	
CR-141,520*IN THE NASA AMES *	*, EXPOSED WING HIN*		(U*B. J FRICKEN *
*8 X 7-FOOT UNITA *	*GE MOM , WING PRE*	* +NITARY)	*-DMS *
RY WIND TUNNEL(IA	*SS DIST ,ORBITER*	* *	* *
*12C) *	*MPS EXTERNAL PRE *	* *	* *
* *	*SS DIST ,AND MOD*	* *	*
* *	*EL BASE PRESSURES*	* *	*
* *	* * *	* *	* *
LARC - *HYPERSONIC PERFOR*SPACE SHUTTLE OR		·	*R W POWELL/NASA L*DMS-DR-2066
CFHT - *MANCE, STABILITY +ITER 089B-139 96 /*AND CONTROL CHARA*	*RSONIC AERODYNAMI*	*10 3 - *LARC -	*ARC *NOV , 1973
, , , , , , , , , , , , , , , , , , , ,	*C CHARACTERISTICS*		FLO*T.A BLACKSTOCK/NA*
LA11 *CTERISTICS OF A * CR-128.783*0075 SCALE MODEL *	*OF SHUTTLE ORBIT * *ER *	* +W HYPERSONI * +UNNEL	*J E VAUGHN *
ROCKWELL INTERNAT	* = * * * * * * * * * * * * * * * * * *	* *UNNEL	*U E VAUGHN * *B J FRICKEN *
**************************************	* *	* *	*-DMS *
ITER CONFIGURATIO	* *	, , , ,	*_DM2
*N *	T T		* *
*	* *	<u> </u>	
LARC - *FLUTTER TESTS (DS*0.025 SCALE MODE	**************************************	CT-DYN*O 025 / *LARC /	*J. W. FOUST/ROCKW*DMS-DR-2067
26TBT - *2) OF THE SHUTTLE*OF SPACE SHUTTLE		*0 6 - *LARC -	*ELL *AUGUST. 1973
544 /*ORBITER FIN/RUDD *ORBITER (24-0) F	·		NSO*A T. KAVANAUGH *
OS2 *ER MODEL 24-O *IN/RUDDER	*N THE TRANSONIC *	* *NIC BLOWDOW	
CR-128.777* *	*FLIGHT REGION TO *	* *UNNEL	* *
* *	*SUPPORT ANALYTICA*	* *	*
*	*L FLUTTER PREDICT*	* *	* *
*	*IONS *	* *	* *
* *	* *	* *	* *
NRLAD - *EFFECTS OF THE AI*-89B(2A) ORBITER	*EFFECTS OF FERRY *FORC	E *0 0405 / *NR /	*R MENNELL /ROCKW*DMS-DR-2068
LSWT - *R BREATHING PROPU*	*ENGINT NACELLE GR*	*0.20 - +NRLAD -	*ELL *DEC., 1973
708 /*LSION SYSTEM ON S*	*OUPING AND LOCATI*	* *LOW SPEED W	IND*D A SARVER * '
OA71A *PACE SHUTTLE ORBI*	*ON *	* *TUNNEL	*W. M HALE *
CR-128,797*TER SUBSONIC STAB*	* *	* *	*-DMS *
*ILITY AND CONTROL+	* *	* *	* *
*CHARACTERISTICS *	* *	* *	* *
*(DA71A) +	* *	* *	* *
* *	* *	* *	* *

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						WIND	TUNNEL	TEST /	' C	MS DATA	PROCE	SSIN	G							12
				- ·		*			*		*MODE!	 L	,	*		*	C	OGNIZANT	* BASI	C
TEST				÷	CONFIGURATIONS	*	TEST	r	*	TYPE OF			LE	* TEST	ING	*	TE	ST DMS	*PUBLICA	TION
ID		, DEDUD	T TITLE	*	TESTED	-tc	PURPOS		+	–				AGEN		*	Р	ERSONNEL	*OR COMM	ENTS
ARC	_	.creecte	OF DEACT	T + DI	RR ORBITER	********	ERFEREN	e stun)*FC	RCF	*0.01	5	/ >	*LARC	1	*J	R.R	AUSCH/ROCK	WE*DMS-DR-	2069
PWT			ROL SYSTE		KK OKDITEK		SUPER:				*2 5	-	-	*LARC	-	*LL	.	•	∗JAN .	197
031			FIELD I			*PEEC	-		*		*4 0				Y PLAN	₩₩W	J M	IONTA/LARC	*	
A7	•	*NTERACT		*			DETERMIN	OF CONT	T *		4			IND TU				VAUGHN	*	
			SCALE MO				AMPLIF				*		,	*				KAVANAUGH	 *	
K-134,			SCALE MO				TORS RES				+		,	k		* -E	OMS		*	
		_					ROM JET				*		,	*		*			*	
		*IC *IC	AERODYNA	VĮ T			CON BET				*		,	+		*			*	
			COTETICE	٦ ا			S PLUM				*		8	+		*			*	
		*CMARAGII	ERISTICS	T.			EXTERN				*		,	+		*			*	
				4			S THE VI				*		,	+		*			*	
				4		*	C THE V	-11666	*		*		,	*		+			*	
		· ·FFFFOT (~ ~ . •	SC 040A ORBITER		EDMINE (EEECT		DCE	+.019		/ ,	+LARC	/	*.1	В	DODS.JR .	J*DMS-DR-	2070
ARC					ITH EHOT AND 2 S					, NOL	*16			*LARC	<u>'</u>			BROWNSON.		197
TPT							SEPAR				*2.2				PRIII FN			SSNER / AR		
41			T PLUMES		AI.		ASPIRAT:				*							BLACKWELL		
A23			DA SPACE				S DUE TO				· •			*EL			SFC		*	
R-128,			LAUNCH C								7 1			*				SPARKS	*	
			TION AT M				V OF BO				т т		,					KAVANAUGH	l *	
			ERS FROM	1*			ITER AND				-T		,	·			OMS	NATHIHOU:	*	
		* 6 TO 2	2	*			D ROCKE	ייטו אט ו	ζ T.		, 			T.		*	J141.J		*	
		*		*		+\$			T.		- -					*			*	
		*		*		*			*	nor	*0 01	-		+ARC	,	**	- 1	DZIUBAŁA,	M*DMS-DD-	2071
RC					DDEL 32-0		AIN STAN			JRCE	*0.01		•	*ARC	,			MILAM/ROCK		
5HWT	_			-	DDEL 49-0		CONTRO				*5.3	_			מעם דה			TERNATIONA		,
68	,	_	E MODELS				RISTICS		4*		*10.3							CLEARY, J		
A23			SHUTTLE				A BASEL		*		*10 3			*SUNIC	M T MD I			LENTHIN/NA		
R-128,			CONFIGURA				ICLE CO	AF I GURA	1 *		*			TINET			MES	CCIA: LITINA IAN		
			AND 3A IN			*TIO	V		*		*			•				MYERS	*	
			S RESEARC			+			*		*			•		_	OMS	MICKS	*	
			3.5-FOOT			*			*		*		,	* -•-		4 - E	OMIC		T.	
			NIC WIND	T *		*			*		*			τ					<u>.</u>	
		+UNNEL (□	DA23)	*		*			*		*			*					*	
		*		*		*			*		*		,	*	,	- ~		MCEV /MCEG	* ************************************	.0070
SFC	-	+MISALIG	NMENT STU	D*P	RR BASELINE LAUP	1*EFF	ECTS OF	MODEL	*F0	JRCE	+ 0 0			+MSFC	/			MSEY /MSFO		197
4TWT	~	*IES ON	SPACE SHU	T*C	H CONFIGURATION	*ELE	MENT MI	SALIGN	4*		*0.9			*MSFC					DA FUAIN .	13/
73	1	*TLE INT	EGRATED V	E*M	CR 0074 BASELIN	*ENT	ON TES	T RESUL	_*		*1.46			*14-INC					*	
A31FC		+HICLE		*M	ODEL ELEMENTS	*TS			*		*			*IC WIN	U TUNN			SPARKS	* 	
R-134,	072	*		*		*			*		*			*				KAVANAUG	1 *	
		*		*		+			*		*			*		*-[DMS		*	
																*				

	WIND TUNNEL TEST / DMS DATA	PROCESSING 128
* *	* *	*MODEL * * COGNIZANT * BASIC
TEST * * CONFIGURATIONS	· · · · · · · · · · · · · · · · · · ·	
ID * REPORT TITLE * TESTED	* PURPOSE * TEST	*MACH RANGE* AGENCY * PERSONNEL *OR COMMENTS
LARC - *EFFECTS OF REACTI+MODEL 42-0 OF TH	HE*OBTAIN THE DETAIL*FORCE	*O 015 / *LARC / *J J. DAILEDA, JO*DMS-DR-2073
UPWT - *ON CONTROL SYSTEM*VL70-000139B SSV		* *LARC - *HN MARROQUIN *MARCH, 1974
1043 /*JET SIMULATION 0 +ORBITER CONFIGUR	*CS JET FLOW INTER+	* *UNITARY PLAN W*J E VAUGHN *
OA7O *N THE STABILITY *ATION 3	*ACTIONS HAVE ON S*	* *IND TUNNEL *A T. KAVANAUGH *
CR-134,070*AND CONTROL CHARA*	*UPERSONIC STABILI*	*
CTERISTICS OF A O	*TY AND CONTROL CH*	* * *
* O15 SCALE SPACE *	*ARACTERISTICS OF *	* * *
*SHUTTLE MODEL *	*THE SPACE SHUTTLE*	* * *
TESTED IN THE LAN	*VEHICLE +	* * *
GLEY RESEARCH CEN	*	* * *
*TER UNITARY PLAN *	* *	* * *
*WIND TUNNEL *	* *	* * *
NDIAD - *EFFECTS OF THE ATA COD CDAOS CHART	* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *
NRLAD - *EFFECTS OF THE AI*-89B SPACE SHUTT LSWT - *R BREATHING ENGIN*E ORBITER FERRY		*O 0405 / *NR / *BRUCE W. CAMERON,*DMS-DR-2074 *O 165- *NRLAD - *JR /RI *OCT . 1974
	*URE DISTRIBUTION *	**
0A57A *RBITER SUBSONIC W*	*RESULTING FROM FI*	* *TUNNEL *-DMS *
CR-134,414*ING PRESSURE DIST*	*VE UNDER-WING ENG*	* * * * * * *
*RIBUTIONS *	*INE NACELLE PLUME*	* * *
* *	*S *	* * *
* *	* *	* * *
LARC - *INVESTIGATION OF *MODEL SS-H-00326	S-*AERODYNAMIC HEATI*HEAT-TRANS	*0.00593 / *LARC / *H. GOROWITZ/RI *DMS-DR-2075
8VDHT - *CONFIGURATION EFF+1	*NG INVESTIGATIONS*	*7 9 - *LARC - *A. T KAVANAUGH *OCT 1973
3778/ /*ECTS ON ENTRY HEA+	* *	*7 9 *MACH 8 VARIABL*-DMS *
3855 /*TING DISTRIBUTION*	*	* *E-DENSITY HYPE* *
0H41 *S AT MACH = 8 O (*	* *	* *RSONIC TUNNEL * *
CR-128.784*OH41) *	* *	* * *
* *	*	* * *
	*AERODYNAMIC HEATI*HEAT-TRANS	
8VDHT - *CONFIGURATION EFF*SS-H-00326B-5,-6	5,+NG INVESTIGATIONS*	*O 006 / +LARC - *R. WHITE, A. D'ER*OCT., 1973
4060/ /*ECTS ON ENTRY HEA*-7	* *	*7 9 - *MACH 8 VARIABL*RICO/GRUMMAN *
4079 /+TING DISTRIBUTION+NR 110D	* *	*7 9 *E-DENSITY HYPE*A T KAVANAUGH *
OH41A +S AT MACH NO = 8 *	* *	* *RSONIC TUNNEL *-DMS *
CR-128,785*O (OH41A) *	* *	* * *
* *	* *	* * *

						WIN	TUNNEL TEST	/ 1	DMS DATA	PROCES	SSING							129
					~					+MODEL		*			 *	COGNIZANT	* BASIC	
TECT	* *			¥	CONFIGURATIONS	¥r u∟	TEST	4	TYPE OF				TESTING			TEST DMS	*PUBLICAT	
TEST			EDODT TITLE			*	PURPOSE	*					AGENCY		*	PERSONNEL	*OR COMME	-
ID	*	- K	EPORT TITLE	*	TESTED	~ 	PURPOSE	~ · - -		* MAGN	INMING							
ARC					40A/B ORB., VEH				RESSURE	*0.015		*ΔR				SPANGLER, D		
66SWT			3 AND IA29 ON				PRESSURE DISTR			+0 6	-	+AR				THORNTON, RO		
630					HUTTLE ORBITER Y					*2 0						L INTERNATION	VA*MAY.	1974
IA29	+	DEL	OF THE SPACE	+EI	NT PRESSURE MODI					*			SUPERSO				*	
0A63	*	SHU	TTLE CONFIGURA	*L	36-01S	*R .	ASCENT FLIGHT	T *		*		∗WI	ND TUNNE			GUIST, CAR	_ *	
CR-134,	095*	TIO	N 140 A/B IN T	Γ*		+0	SUPPORT VEHICL	.E*		*		*				SUTTON, ARC	*	
	*	HE	NASA/ARC 6- BY	/*		*VE	NTING STUDIES	*		*		*				J. FRICKEN	*	
	*	6-F	OOT TRANSONIC	*		*		*		*		*			*-DM	S	*	
	*	WIN	D TUNNEL	+		*		*		*		*			*		*	
	*			*		*		*		+		*			*		*	
ARC	- +	RES	ULTS OF TESTS	+14	40A/B ORB., VEH	*T0	DETERMINE LOC	A+PI	RESSURE	+0 015	5 /	*RC	/			H SPANGLER	•	
66SWT			3 AND IA29 ON				PRESSURE DISTR			*0 6	-	*AR	C -		*D	E THORNTON	,R*VOLUME (02
630			O 015-SCALE MC			*BU	TIONS ON THE C)R*		*2.0		*6 -	FOOT BY	6-F0	*DCK	WELL INTERNAT	ΓΙ*ΜΑΥ,	1974
IA29	· *	DEL	OF THE SPACE	*		481	TER FUSELAGE F	0+		*		*01	SUPERSO	NIC	*ONA	L	*	
CR-134.			TTLE CONFIGURA			∗R .	ASCENT FLIGHT	T*		*		+WI	ND TUNNE	L	*L	R. GUIST , CA	\R*	
, ,			N 140 A/B IN 7			+0	SUPPORT VEHICL	.E*		*		*			*L E	SUTTON, AME	ES*	
			NASA/ARC 6- BY			*VEI	NTING STUDIES	*		*		*			*B	J FRICKEN	*	
			OOT TRANSONIC			*	******	*		*		*			*-DM	S	*	
			D TUNNEL	*		*		*		+		*			*		*	
	*			*		*		*		*		*			*		*	
ARC	- *	PES	ULTS OF TESTS	+1	40A/B ORB., VEH	*TO	DETERMINE LOC	A*PI	RESSURE	*0.015	5 /	ΨAR	c /		*R	H SPANGLER,	D*DMS-DR-2	2077
66SWT			3 AND IA29 ON				PRESSURE DISTR		· · ·	*0 6		* AR	C -		* E	. THORNTON/RI	*VOLUME C	03
630			O 015-SCALE MC		21, 2 3 3		TIONS ON THE C			*2 0		+6-	FOOT BY	6-F0	*L.	R GUIST , CA	AR*MAY,	1974
0A63			OF THE SPACE				TER FUSELAGE F			*						SUTTON, AME		
			TTLE CONFIGURA				ASCENT FLIGHT			*			ND TUNNE			J FRICKEN	*	
CK-134,		-	N 140 A/B IN T		\		SUPPORT VEHICL			*		*			+-DM		*	
			NASA/ARC 6- BY				UDIES	*		+		*			*	-	*	
			OOT TRANSONIC			*	55165	*		*		*			*		*	
			D TUNNEL			- -		*		+		*			*		*	
	*		DIONNEL	- -				*		*		*			*		*	
100	.,		O THUME! TECT	T 840	DDEL 32-OT WITH	±EV	ALLIATE DACTO L	1V + E(DDCF	* 0 01	10 /	*AD	c /		*F	F FIZGERALD	*DMS-DR-2	2078
ARC					RBITER, ET, SIM				UNGL	*	. ,	*AR				T PETROZZI/		1974
3 5mwi	- 1	or .c.c	THE O DIO-SCAL	ייייייייייייייייייייייייייייייייייייי	ATED ENGINE PLU	J-FL;	CICETOARE CINCEN			*						WELL INTERNAT		
							FIRST AND	*		4		_	NIC WIND				*	
IA10			GRATED VEHICLE		>		COND STAGE AND			•		+NE				W CLEARY. J	*	
CR-128,			THE NASA-AMES				DEFINE ORBITE			*		*	L	-	_	MELLENTHIN/		
			-FOOT HYPERSO							 						AMES RESEARCH		
			WIND TUNNEL (*			UME EFFECTS ON			T.					*CEN		*	
	*	IA1	0)	*			RO CHARACTERIS			л		±				W MYERS	*	
	*			*			CS USING SOLIC	, **		т "		4			″© *-DM		*	
	*	•		*			UMES	*				т.			* - DIVI *	3		
	*	•		*		+		*		*		*			T		~	

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					WIND T	UNNEL TEST	1	DMS DATA	PROCES	SING					130
TEST ID		REPORT TITLE		CONFIGURATIONS TESTED		TEST PURPOSE		TYPE OF TEST		SCALE	* * TESTING * AGENCY	* * *	COGNIZANT TEST DMS	*PUBLIC	ATIONS
								1651	*MACH	KANGE	* AGENCY	*	PERSONNEL	*OR COM	MENTS
ARC	~ *E	FFECTS OF SUR	FAC*O	89B-139B(MODIFI				ORCE	*0 01	/	*LARC /	*G.	C.ASHBY, JR	/NAS*DMS-DR	-2079
OHT6		ROUGHNESS ON		NOSE)		REGULARITI			*6.0	-	*LARC -	*Δ,	LARC	*APRIL,	1974
41_		AERODYNAMIC				RE POSSIBL			*6 O		*20-INCH HYPI	ERS∗J	E. VAUGHN	*	
A 15		ACTERISTICS D				ARY LAYER			*		*ONIC TUNNEL	(M*-D	MS	*	
R-134,		E MODIFIED 08			*PARAT	ION HYSTER	EI*		*		*ACH 6)	*		*	
		HUTTLE ORBITE			*S EFF	ECT	*		*		*	*		*	
	*A	T MACH 6 (LA1	5) *		*		*		*		*	*		*	
	*		*		*		*		*		*	*		*	
IRLAD	- *E	FFECTS OF AIR	BR*-	B9B SPACE SHUTT	L*INVES	TIGATE ORB	IT+P	RESSURE	+0 040	5 /	+NR /	*T	SOARD /RI	*DMS-DR	-2080
.SWT	- *E	ATHING ENGINE	PL+E	ORBITER FERRY	C+ER WI	NG PRESSUR	E *F	ORCE	+0 20		+NRLAD -	*R	B LOWE	*VOLUME	01
13	/*U	MES ON SSV OR	BIT*0	NFIGURATION		IBUTIONS R			*		*LOW SPEED W			*OCT ,	
A57B	+E	R SUBSONIC WI	NG *		*ULTIN	G FROM NAC	EL*		*		*TUNNEL	*		*	
R-134,		RESSURE DISTR	18U*		*LE PL	UMES ABOVE	A *		*		*	*		sk:	
	* T	ION	*			LOW THE WI			*		*	*		*	
	*		*		*		*		*		*	*		*	
RLAD	- *E	FFECTS OF AIR	BR*-	39B SPACE SHUTT!	*INVES	TIGATE ORB		RESSURE	*0.040	5 /	*NR /	*T	SOARD /RT	*DMS-DR	-2080
SWT	- *E.	ATHING ENGINE	PL*E	ORBITER FERRY	+FR WI	NG PRESSUR	F *F	ORCE	*0.0	•	*NRLAD -		B LOWE	*VOLUME	
13	/*U	MES ON SSV OR	BIT*O	VEIGURATION		IBUTIONS R		ONOL	*		*LOW SPEED W			*DCT	
A57B	*EI	R SUBSONIC WI	NG *			G FROM NAC			*		*TUNNEL	TIAD D	1113	~UO1.,	13/4
R-134,	417*P	RESSURE DISTR	IBU*			UMES ABOVE			*		* LOIMACE				
·		ION	*			LOW THE WI			•		•	- T		<u> </u>	
	*		*		*	COM THE WI	*		±		*	- T			
RLAD	- *1	ANDING PRESSII	DF *-	140 A/B SPACE SH		HDE LOADS		precupe	*0.040	- /		. T	1 50400	* N*D440 DB	0004
SWT	~ *Ií	DADS OF THE -	140*11	TTLE ORBITER		GROUND EF			+0 2				L SDARD, I		
11	/*A	B SPACE SHUT	140*0 TI *	ITEC ONDITER	*CT	GROUND EF	FET		*O 2		*NRLAD - *LOW SPEED W:		CAMERON /RO		01
A69		ORBITER DETE			~01				*		*TUNNEL		C ZIMMERLI	, NAU*	1976 ⊊
		INED IN THE N				,			т "		* I ONNEL	*H *-D		E *	
		LOW SPEED WI			±	•	*				*	*-D	MS	*	2
		JNNEL (DA69)	, UNI		т.				*		*	*		*	>
	* '	SIMILE (GMOS)	T.		-1-		*		*		*	*		*	Ş
RLAD	- *L	AMDING DDECCH		140 A/B SPACE SH	T LABBECCI	UDE LOADS	* D4*	DECCUBE	* 0.40	. ,	*	*		*	
SWT		NADING FRESSU:	440411	TTLE ORBITER		URE LUADS GROUND EF				•	*NR /		L SOARD, E		
11		B SPACE SHUT		LICE OKRITEK		GROUND EF	rt*F	UKCE	*0 2		*NRLAD -		CAMERON /RO		⁰² C
A69		ORBITER DETE			*CT		*		*0 2		*LOW SPEED WI			*JAN.,	1976
					*		*		*		*TUNNEL		C ZIMMERLI	E *	
K = 14 (,)		INED IN THE N			*		*		*		*	*-D	MS	*	4M:
		LOW SPEED WIT	MD *		*		*		*		*	*		*	
	*TI	JNNEL (OA69)	*		*		*		*		*	*		*	
	*		*		*		*		*		*	*		*	

1	131				3	CESSING	PRO	DMS DATA	т / І	TUNNEL TES	WIN						
-	* BASIC	COGNIZANT	*)FL	*MO		*		*						
S	*PUBLICATIONS	TEST DMS	*	TESTING	LE*	_		TYPE OF	*	TEST	nns +	ONF I GURAT	*			r 4	TES
	*OR COMMENTS	PERSONNEL	*			CH RANG		TEST		PURPOSE	*	TESTED	*	RT TITLE	DEPO		ID
-																	
	/RO*DMS-DR-2082				/ *AF		*0	DRCE		ERTAIN THE		FIGURATIO	TI*CO	5 OF REAC	FFECT	- +	€C
3	*DEC , 1973	WELL			+ A F	29-				'S OF RCS JE		ITER	EM*OR	TROL SYSTI	ON COI	- *	5HWT
	/RD*	MARROQUIN			-		*			/ FIELD INTE			0 +	MULATION (JET S	/*	7
	*			MIC MIND	_		*		LO*	INS WITH THE	*TJ		*	STABILITY	I THE	*	173
	*	M MANN		L	∗NE		*		ON*	. FLOW FIELD	*C#		RA*	NTROL CHAP	AND CO	,800+	128
	*	MS	*-D		*		*		Д *	HYPERSONIC	+ T ŀ		0*	TICS OF A	CTERIS	*	
	*		+		+		*		ST*	DYNAMIC AND	*EF		E *	CALE SPACE	015-5	*	
	*		*		+		*		NTR+	LITY AND CO	*AE			E ORBITER	_		
	*		*		+		*		TIC+	CHARACTERIS	+01			IN THE AMI			
	*		*		*		*		ER *	F THE ORBIT	+\$			CH CENTER			
	*		*		*		*		¥ *	RING RE-ENTR	+Dl		0N*	OT HYPERS	3 5-FC	*	
	*		*		*		+		*		*		*	D TUNNEL			
	*		*		*		*		*		*		*			*	
	II, *DMS-DR-2083	H CAMPBELL,I	ا ان∗	RC /	/ *LA	015 /	*0	DRCE	UPE*F	DETERMINE S	BITE*TO	140A/R 0	ST *SS	S OF INVE	PESHLI	- *	RC
4	'ROC*FEB., 1974	E.NICHOLS /	*M	RC -	*L#	5 - ·	*2			NIC TRIM AN		, -		NS (0A20)			WT
	*	ELL	LAN W*KW	IITARY PL	*UN	3	*4			ILITY CHARA				015-SCALE			57
	LAR*	P PHILLIPS /	L ∗₩.!	D TUNNEL	*IN		+			TICS FOR TH			*	JIO SOREE	10 A/E		20A
	*		*C		*		*		- *	A/B ORBITER			P Δ*	URATION SI			
	*	M MANN	*M		*		*		*	,, 5 0,,52,	*			TTLE VEHIC		, .	. 104
	*	MS	*-DI		*		*		*		*			TER MODEL			
	*		*		*		*		*		*		*	TEN MODEL	N THE		
	*		*		*		*		*				CE 4	ANGLEY RES			
	*		*		*		*		*		•		-	ENTER UNI			
	*		*		*		*		*					N WIND TU			
	*		*		*		•						י פועו	4 WIND IOI			
	*		*		*		*				л ъ		- A-		EL	*	
	E.*DMS-DR-2084	1 GILLINS	*D	r /	/ +AF	20 /	*0	neceune	E D+DI	ATH DECCUE	LINALI.	4404 /D 1	T 0 1 0 0				
	*VOLUME 01	EE/RI		-	, *ΔF)30 / 3 -	-			AIN PRESSUR		140A/B L					₹C
5 .	*FEB . 1975	A SARVER				-	*1	URCE		RIBUTIONS OF				OF AN O			TWT
•	*	T.DAVIET				+	*			GRATED LAUN				E MODEL OF	-		6
	**			(UNITARY			*		IAI*	ICLE; TO OB				ACE SHUTT			14A
	₩ ₩	MO	1) *-D	(UNITAR)	* L		*		*	ORCE DATA	*N			E 140A/B			2-134
	 				*		**		*		*			ONF I GURAT			
			.		*		*		*		*			EL 47-OTS			
	7°		<i>∓</i>		*		*		*		*			ARC 11-F			
	7F		**		*		*		*		*			ARY PLAN			
	at.		*		*		*		+		*			NEL FOR M			
	*		*		*		*		*		+		1.*	E 0.6 TO	1 RANG	+	
	*		*		+		*		+		*		+	4A)	AI) P	+:	
	*		*		*		•										

	WIND TUNNEL TEST ,	DMS DATA	PROCESSING			132
* * CONFIGURATIONS ID * REPORT TITLE * TESTED	* * TEST * PURPOSE	* * TYPE OF * TEST		* TESTING	* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
ARC - *AIRLOADS INVESTIG*SSV 140A/B LAUNCH 11TWT - *ATIONS OF AN O 03* 716 /*O-SCALE MODEL OF * IA14A *THE SPACE SHUTTLE* CR-134,444*VEHICLE 140A/B LA* *UNCH CONFIGURATIO* *N (MODEL 47-OTS) * *IN THE ARC 11-FOO* *T UNITARY PLAN WI* *ND TUNNEL FOR MAC* +H RANGE O 6 TO 1 *	**OBTAIN PRESSURE E *ISTRIBUTIONS ON D *NTEGRATED LAUNCH *VEHICLE, TO OBTAD *N FORCE DATA * * * * * * *	[*FORCE *	*1 4 *	*ARC - *11-FOOT TRANSO *NIC WIND TUNNE		*DMS-DR-2084 *VOLUME 02 *MARCH, 1975 * * *
*4 (IA14A) * * * ARC - *AIRLOADS INVESTIG*SSV 140A/B LAUNCH 11TWT - *ATIONS OF AN O 03* 716 /*O-SCALE MODEL OF * IA14A *THE SPACE SHUTTLE*	* * * ** ** ** ** ** ** ** ** ** ** **	*FORCE	*0 6 - *1.4			* * .*DMS-DR-2084 *VOLUME 03 *APRIL, 1975
CR-143.445+VEHICLE 140A/B L + *AUNCH CONFIGURATI* *ON (MODEL 47-OTS)* *IN THE ARC 11-FO * *OT UNITARY PLAN W* *IND TUNNEL FOR MA*	*N FORCE DATA * * * * * * * * * *	* * * * * *	* * * * * * * * *	*L (UNITARY) * * * *	*-DMS * * * *	* * * * * * *
CH RANGE O 6 TO 1 *.4 (IA14A) * * ARC - *AIRLOADS INVESTIG*SSV 140A/B LAUNCH 11TWT - *ATIONS OF AN O 03*	* * * * *OBTAIN PRESSURE D *ISTRIBUTIONS ON 1				* * * * * *R L GILLINS, E *CHEE/RI	* * * * *DMS-DR-2084 *VOLUME 04
716 /*O SCALE MODEL OF * IA14A *THE SPACE SHUTTLE* CR-143,446*VEHICLE 140A/B L * *AUNCH CONFIGURATI* *ON (MODEL 47-OTS)* *IN THE ARC 11-FO *	*NTEGRATED LAUNCH *VEHICLE; TO OBTAI *N FORCE DATA * *	*	*1.4	*11-FOOT TRANSO *NIC WIND TUNNE	*D A SARVER	*APRIL, 1975 * * * * * *
OT UNITARY PLAN W *IND TUNNEL FOR MA+ *CH RANGE O 6 TO 1* + 4 (IA14A) * *	* * * *	* * * *	* * * * * * * * * * * * * * * * * * * *	* * * * *	* * * * *	* * * *

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						133
	WIND TUNNEL TEST /	DMS DATA	PROCESSIN	NG 		133
* *	*	k	+MODEL	*	* COGNIZANT	* BASIC
TEST * * CONFIGURATIONS	* TEST :	* TYPE OF	* SCA	LE* TESTING	* TEST DMS	*PUBLICATIONS
ID * REPORT TITLE * TESTED		+ TEST	*MACH RAN	IGE* AGENCY	* PERSONNEL	*OR COMMENTS
ARC - *AIRLDADS INVESTIG+SSV 140A/B LAUNC	H*OBTAIN PRESSURE D	*PRESSURE	*O 030		∗R L GILLINS, E	
11TWT - *ATIONS OF AN O 03*	*ISTRIBUTIONS ON I:	*FORCE	*O 6 ~		*CHEE/RI	≁VOLUME O5
716 /*O-SCALE MODEL OF *	*NTEGRATED LAUNCH	ł	+1 4	+11-FOOT TRANSO	*D A. SARVER	*APRIL, 1975
IA14A *THE SPACE SHUTTLE*	*VEHICLE; TO OBTAI	r	*	+NIC WIND TUNNE	*J.T DAVIET	*
CR-143,447*VEHICLE 140A/B L *	+N FORCE DATA	*	+	*L (UNITARY)	*-DMS	*
AUNCH CONFIGURATI	•	+	+	+	*	*
ON (MODEL 47-OTS)	+	k	*	*	*	*
*IN THE ARC 11-FO *	*	k	*	*	*	*
OT UNITARY PLAN W	*	k	+	*	*	*
*IND TUNNEL FOR MA+	*	+	+	*	*	*
CH RANGE O 6 TO 1	*	+	*	+	*	+
* 4 (IA14A) *	*	*	*	*	*	*
* *	*	+	*	*	*	*
ARC - +AIRLOADS INVESTIG*SSV 140A/B LAUNC	H+OBTAIN PRESSURE D	*PRESSURE	+0.030	/ *ARC /	*R L. GILLINS, E	*DMS-DR-2084
11TWT - *ATIONS OF AN O 03*	*ISTRIBUTIONS ON I		*	*ARC -	*CHEE/RI	*VOLUME 06
716 /*O-SCALE MODEL OF *	*NTEGRATED LAUNCH	k	*	+11-FOOT TRANSO	*D. A SARVER	*APRIL, 1975
IA14A *THE SPACE SHUTTLE*	*VEHICLE, TO OBTAI	*	*	*NIC WIND TUNNE	+J T.DAVIET	*
CR-143.448*VEHICLE 140A/B L *	*N FORCE DATA	+	+	+L (UNITARY)	*-DMS	*
AUNCH CONFIGURATI	*	k	*	+	*	*
ON (MODEL 47-OTS)	*	k	*	*	*	*
*IN THE ARC 11-F0 *	*	+	*	*	*	*
OT UNITARY PLAN W	*	ł	*	*	*	*
*IND TUNNEL FOR MA+	* ′	*	*	*	*	*
CH RANGE O 6 TO 1	*	*	*	*	*	*
* 4 (IA14A) *	*	*	*	*	*	*
* *	*	r	*	*	+	*
ARC - +AIRLOADS INVESTIG+SSV 140A/B LAUNC	H*OBTAIN PRESSURE D:	*PRESSURE	+0 030	/ *ARC /	*R L. GILLINS, E	*DMS-DR-2084
11TWT - *ATIONS OF AN O 03+	*ISTRIBUTIONS ON I		*O 6 -		*CHEE/RI	*VOLUME 07
716 /+O-SCALE MODEL OF *	*NTEGRATED LAUNCH		*1 4	*11-FOOT TRANSO	*D A. SARVER	*APRIL, 1975
IA14A *THE SPACE SHUTTLE*	*VEHICLE, TO OBTAI		*	*NIC WIND TUNNE	*J T.DAVIET	*
CR-143,449+VEHICLE 140A/B L *	*N FORCE DATA	*	*	+L (UNITARY)	*~DMS	*
AUNCH CONFIGURATI	*	+	*	*	*	*
ON (MODEL 47-OTS)	*	+	*	*	*	*
*IN THE ARC 11-FO *	*	*	*	*	*	*
+OT UNITARY PLAN W+	*	t	*	*	*	*
IND TUNNEL FOR MA	*	*	*	+	*	+
CH RANGE O 6 TO 1	• k	+	*	*	*	*
* 4 (IA14A) *	*	*	*	+	* 、	*
* * (14(44) *	·	k	*	*	*	*
₹	- -		•			

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						WIND	TUNNEL TEST	/ 01	MS DATA	PROCES	SING						134
	*			*		*		*		*MODEL		*		*	COGNIZANT	* B	ASIC
TEST	*			*	CONFIGURATIONS	*	TEST	* .	TYPE OF				STING		TEST DMS		ICATIONS
ID	*	RE	PORT TITLE		TESTED	*	PURPOSE		TEST	*MACH				*	PERSONNEL		OMMENTS
RC	- *	ATDI	TANG TANGG	T10#9	SV 140A/B LAUNCI	ATONT.	TN DOECCUDE I	Danni	Eccupe	*0 020	. ,	*D * C	,		I OTLLTNE	E #DMC	DD 0004
1TWT	- *	ATTO	NS OF AN C	111010	SV 140A/B LADING					*0 030	•	*RAC	/		L GILLINS,	_	
16			ALE MODEL				IBUTIONS ON		RCE			*ARC	-		HEE/RI		ME OB
A 14A							RATED LAUNCH			*					A. SARVER	*APRI	L, 1979
			SPACE SHUT				CLE; TO OBTA	1*		*					T DAVIET	*	
K-143,			CLE 140A/B			*N FU	RCE DATA	*		*		*L (U	NITARY)	*-[DMS	*	
			H CONFIGUR			*		*		*		*		*		*	
		•	MODEL 47-0	/		*		*		*		*		*		*	
	*	IN T	HE ARC 11-	FO *		*		*		+		*		*		*	
			VITARY PLA			*		*		*		*		*		*	
	*	IND	TUNNEL FOR	MA+		*		*		*		*		*		*	
			ANGE O 6 T			*		*		*		*		*		*	
			IA14A)	*		*		*		*		*		*		*	
	+			*		*		*		*		<u>.</u>					
≀C	- *	TARL	DADS INVES	TIGES	SV 140A/B LAUNCE	I*∩RTA	IN DOESSIDE !	กะออ	FCCLIDE	*0 030	. /	*ARC	/	*D	. L GILLINS.	E *DMC-	DD~2094
TWT			VS OF AN O		SV 140A/B CAGNO		IBUTIONS ON			*0 6	•	*ARC	_		HEE/RI		
6			ALE MODEL				-		RCE	*1 4			-				ME 09
114A							RATED LAUNCH			*1 4					. A SARVER	*MAY,	197
			SPACE SHUT				CLE; TO OBTA	1*		*					T.DAVIET	*	
(*141,			CLE 140A/B			*N FU	RCE DATA	*		*		*L (U	NITARY)	*-[DMS	*	
			1 CONFIGUR			*		*		*		*		*		*	
	*	ON (1	MODEL 47-0	TS)*		*		*		*		*		*		*	
	*	IN T	HE ARC 11~	FO *		*		*		*		*		*		*	
	4	OT UI	NITARY PLA	N W*		*		*		*		*		*		*	
	*	IND :	TUNNEL FOR	MA*		*		*		*		*		*		*	
	*	CH R	ANGE O 6 T	0 1*		*		*		*		*		*		*	
			IA14A)			*		*		*		*		*		*	
	*		,	*		*		*		*		*		*		*	
₹C	- *	ATRI	DANS INVES	TIGES	SV 140A/B LAUNCE	1⊁NRT∧	TN DDEEGIIDE 1	n * DDI	EGGLIDE	*0.030	. /	*ARC	/	* D	L. GILLINS.	F *DMC-	Neor-au
ITWT			NS OF AN O		OV 140A/B EAGNG		IBUTIONS ON			*O.000	•	*ARC	<u>-</u>		EE/RI		ME 10
6			ALE MODEL						RCE	*1 4							
14A							RATED LAUNCH			# 1 4					A SARVER	*MAY,	197
			SPACE SHUT				CLE, TO OBTA	1*		*					T DAVIET	*	
-141,			CLE 140A/B			*N FU	RCE DATA	*		*		*t (U	NITARY)	*-[MS	*	
			1 CONFIGUR	–		*		*		*		*		*		*	
			MODEL 47-0			*		*		*		*		*		*	
	*	IN T	HE ARC 11-	FO *		*		*		*		*		*		*	
	*	OT UI	NITARY PLA	N W*		*		*		*		*		*		*	
	*	IND '	TUNNEL FOR	MA*		*		*		*		*		*		*	
			ANGE O 6 T			*		*		*		*		*		*	
			IA14A)	- *		*		*		*		4		*		*	

			WIND TUNNEL TEST	T / DMS DATA	PROCESSIN	iG		135
	*	*	+	*	+MODEL	*	+ COGNIZANT	* BASIC
TEST	*	* CONFIGURATIONS	* TEST	* TYPE OF	* SCA	LE+ TESTING	* TEST DMS	*PUBLICATIONS
ID	+ REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RAN	GE* AGENCY	* PERSONNEL	*OR COMMENTS
RC	- *AIRLOADS INVESTI	C+CCV 4404/P 1 AUNC	·U+ODTAIN DDESCHDI	F D+DDESSIDE	*U U3U	/ +ARC /	*R L. GILLINS, E	*DMS-DR-2084
	- *ATIONS OF AN O O		*ISTRIBUTIONS OF		t0 6 -	*ARC -	+CHEE/RI	*VOLUME 11
16	/+O-SCALE MODEL OF		*NTEGRATED LAUNG		*1 4		SO*D A. SARVER	*MAY. 1975
A 14A	*THE SPACE SHUTTL		+VEHICLE. TO OB		+	*NIC WIND TUN		*
	503+VEHICLE 140A/B L		*N FORCE DATA	*	*	+L (UNITARY)	*-DMS	*
K 141,5	*AUNCH CONFIGURAT		*	*	*	*	*	*
	*ON (MODEL 47-OTS		*	*	*	*	*	*
	*IN THE ARC 11-FO	•	*	*	+	*	*	*
	*OT UNITARY PLAN		*	*	*	*	*	*
	*IND TUNNEL FOR M		*	*	*	*	*	*
	*CH RANGE O 6 TO		*	*	*	*	*	*
	*,4 (IA14A)	· +	*	*	*	*	*	*
	*	+	*	*	*	*	*	*
RC	- *REPORT OF PRESSUI	R+SPACE SHUTTLE IN	IT*TO OBTAIN HYPE	RSO*PRESSURE	+0 010	, *ARC /	*W H DYE, R. B	. *DMS-DR-2085
	- *E DISTRIBUTION T					/ *ARC -	*KINGSLAND /ROCK	WE*JAN , 1982
71	/*STS OF THE 0.010				*5.3 -	+3 5-FOOT HYP	ER*LL	*
H10	*SCALE SPACE SHUT		*TO CORRELATE AL		+7 4	+SONIC WIND T	UN*D A. SARVER	*
H2	*LE VEHICLE MODEL		*ODYNAMIC HEATIN	NG *	+	+NEL	*H C. ZIMMERLE	*
R-167.3	44+(26-OTS) IN THE	N+	*DATA AND VERIFY	Y L*	*	*	*-DMS	*
,-	*ASA/ARC 3 5-FOOT		*OADS PREDICTION	VS *	+	*	*	*
	*HYPERSONIC WIND	*	*	*	*	*	*	*
	*TUNNEL (TESTS OH		*	*	*	*	*	*
	*O AND IH2)	*	*	*	*	*	*	*
	*	+	*	*	*	+	*	*
RLAD		* [*-89B ORBITER	* *OPTIMIZE AIR B	* REA*FORCE	* *O 0405	* / *NRLAD /	* *R C MENNELL AN	
	* - *EFFECTS OF THE S				* *0 0405 *0 21 -	*NRLAD -	*T. SOARD / ROCK	
SWT	*	A+SPACE SHUTTLE OR		DN *		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL	
SWT 12	* - *EFFECTS OF THE S - *X ENGINE AIR BRE	A+SPACE SHUTTLE OR *ITER/ET	B+THING PROPULSIO	ON * CO*		*NRLAD -	*T. SOARD / ROCK ND*LL *D. E POUCHER	
SWT 12 A71C	* - *EFFECTS OF THE S - *X ENGINE AIR BRE. /*THING PROPULSION	A*SPACE SHUTTLE OR *ITER/ET *	B+THING PROPULSION +SYSTEM NACELLE	DN * CO* N *		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL	
SWT 12 A71C	* - *EFFECTS OF THE S - *X ENGINE AIR BRE /*THING PROPULSION *SYSTEM ON SPACE	A+SPACE SHUTTLE OR *ITER/ET + S*	B*THING PROPULSIG *SYSTEM NACELLE *WL-INLET DESIGN	DN * CO* N * THE*		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL *D. E POUCHER	
SWT 12 A71C	* - *EFFECTS OF THE S - *X ENGINE AIR BRE. /*THING PROPULSION *SYSTEM ON SPACE 078*SHUTTLE ORBITER	A+SPACE SHUTTLE OR *ITER/ET + S* Y+	**THING PROPULSIG *SYSTEM NACELLE *WL-INLET DESIGN *AND DETERMINE *EFFECT OF THIS *ESIGN ON THE OF	DN * CO* N * THE* D * RBI*		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL *D. E POUCHER	
SWT 12 1A71C	* - *EFFECTS OF THE S - *X ENGINE AIR BRE /*THING PROPULSION *SYSTEM ON SPACE 078*SHUTTLE ORBITER *UBSONIC STABILIT	A+SPACE SHUTTLE OR *ITER/ET + S* Y+	**THING PROPULSIG *SYSTEM NACELLE *WL-INLET DESIGN *AND DETERMINE *EFFECT OF THIS	DN * CO* N * THE* D * RBI*		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL *D. E POUCHER	
SWT 12 A71C	* - *EFFECTS OF THE S - *X ENGINE AIR BRE /*THING PROPULSION *SYSTEM ON SPACE D78*SHUTTLE ORBITER *UBSONIC STABILIT *AND CONTROL CHAR	A+SPACE SHUTTLE OR *ITER/ET + S* Y+	**THING PROPULSIG *SYSTEM NACELLE *WL-INLET DESIGN *AND DETERMINE *EFFECT OF THIS *ESIGN ON THE OF	DN * CO* N * THE* D * RBI* AND*		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL *D. E POUCHER	
SWT 12 A71C	* - *EFFECTS OF THE S - *X ENGINE AIR BRE /*THING PROPULSION *SYSTEM ON SPACE D78*SHUTTLE ORBITER *UBSONIC STABILIT *AND CONTROL CHAR	A+SPACE SHUTTLE OR *ITER/ET + S* Y+	**HING PROPULSIG *SYSTEM NACELLE *WL-INLET DESIGN *AND DETERMINE *EFFECT OF THIS *ESIGN ON THE OF *TER STABILITY	DN * CO* N * THE* D * RBI* AND*		*NRLAD - *LOW SPEED WI	*T. SOARD / ROCK ND*LL *D. E POUCHER	

					WIND T	UNNEL TEST	/ [OMS DATA	PROCES	SING							136
	*		*		*		*		*MODEL		*		*		GNIZANT	* BAS	TC
TEST	+		*	CONFIGURATIONS	*	TEST	*	TYPE OF		_	* TESTI	NG	*		T DMS	*PUBLIC	
ID	*	REPORT TITLE	*	TESTED		PURPOSE	*	TEST			* AGENO		*	_	RSONNEL.	*OR COM	_
MSFC	- *E	FFECT OF ENGINE	*SR	B WITH VARIED S	*DETER	MINE EFFECT	S*Ff	BRCE	*0 005	563 /	*MSEC	,	*.1.1	n J	IOHNSON / I	สต-2พถ∗วเ	-2087
14TWT		HROUD CONFIGURAT							*0 4	,	* NSI	<i>i</i> '	*FC		,5,,,,5,5,,,	*SEPT	
578		ON ON THE STATIC				AND SHAPE O			*4.96		*MSFC	′ <u>.</u>			RADDOCK /	•	1317
SA10F				B WITH VARIED			*		*		*14-INCH	TRISC			MADDOON /	*	
CR-134.		HARACTERISTICS C					n*		*		*IC WIND			W	SPARKS	*	
		A 0.00563 SCALE					*		*		*	, , , , , , , , , , , , , , , , , , , ,			SPARKS	*	
		42-INCH DIAMETE			*	311 D	*		*		*		*-D		JI MICICO	*	
		SOLID ROCKET	*		*		*		*		*		*	.45		*	
•		OOSTER	*		*		*		*		*		*			*	
	*		*		*		*		*		*		*			*	
LARC	- *A	ERODYNAMIC CHARA	*14	2-INCH SOLID RO	*AEROD	YNAMICS OF	S*FC	IRCE	*0.021	112 /	*1 ARC	1	*.1.1	חו ח	HNSON/MSF	: *DMS-DR	-2088
8TPT		TERISTICS OF A				RING FREE-F		J110L	*0.02		*LARC	<u>_</u>			DFORD/NSI		1974
655		2-INCH DIAMETER			*LL		*		*12		+8-F00T	TDANSI				*	1317
8TPT		OLID ROCKET	*		*		*		*						KAVANAUGH	*	
662		OOSTER (CONFIGUR	*		*		*				+NNEL	JUNE	*-D		KAYAKAGGI	*	
SA2FA		TION 139)	. ·		*		- T				*8-FOOT	TDANIC		1113			
SA2FB	*	7007	*		*		T T		Ψ.		*IC PRES					*	
CR-134			*		*		*		·		*NNEL	SUKE I	107			T	
,	*		*		*		•		4		*		-#-			*	
LARC	- *P	ESULTS OF INVEST	* 11	OA /R	*VEDIE	Y LONGITUDI	Matr	DOCE	* O O1	·= /		,	۰ ۱۳.۱		CAMPBELL	. I *DMC = DD	-2000
8TPT		GATIONS ON AN O		OA7 B		D LATERAL-D		JACE	*0.35		*LARC		-		E. NICHO		
661		15-SCALE CONFIGU							*1.35			TDANIC					1974
0A25		ATION 140A/B SPA				ONAL CHARAC ICS OF 140A			*12						WELL INTE	<iv*< td=""><td></td></iv*<>	
		E SHUTTLE ORBITE							*		*IC PRES	SOKE				7K A	
CK 134,		MODEL (49-0) IN				ITER, DETER					*NNEL				PHILLIPS/		
		HE NASA/LANGLEY				URFACE DEFL			*		*				RESEARCH	JE*	
		ESEARCH CENTER				EFFECTS ON			-#- -4-		*		*NT		HVEDE	*	
		-FOOT TRANSONIC				LE PERFORMA			*		<i>₹</i>				MYERS	*	
						ND TO DETER			*		*		*-D	М2		*	
		RESSURE TUNNEL (₹ 			OMPONENT BU	1.*		本		*		- T				
	*U	A25)				EFFECTS	*		*		*		*			*	
LADO		UDEDCONIA DEDECO	*		*	=115 - 5116	*		*		*	,	*		Webs /2 100	*	
LARC		UPERSONIC PERFOR						JRCE	* 0 01			/	•		WARE/LARC		
UPWT		ANCE, STABILITY		NE I GURA I IUN		C AERODYNAM			*19	-	*LARC	-	*R		POWELL/LAI	₹C*MARCH,	1974
1040		ND CONTROL CHARA				RACTERISTIC			*2 86		*UNITARY		_		VAUGHN	*	
LA8C		TERISTICS OF A C			*UF A	ROCKWELL IN	\\ 		*		*IND TUN	INEL	*B_		MYERS	*	
CR-134,		01875 SCALE MODE			*		*		*		*		*-D	MS		*	
		ROCKWELL INTERN			*		*		*		*		*			*	
		TIONAL 089B-139B			*		*		*		*		*			*	
		RBITER CONFIGUR	*		*		*		*		*		*			*	
	*A	TION (LASC)	*		*		*		*		*		*			*	
	*		*		*		*		*		*		*			*	

				WIND 1	UNNEL TES	r /	DMS DATA	PROCES	SING						. 	13
	*	*		*		*		+MODEL		*		*	C	OGNIZANT	* {	BASIC
TEST	*	*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	+ TES	STING	*	TE	ST DMS		LICATION
ID	* REPOI	RT TITLE *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGE	ENCY	k	P	ERSONNEL	*OR (COMMENTS
															· ·	
RC .	- *SHRSON	TO AND TRAN+1	D-100 ORBITER	*EFFE(TS OF WIN	3-F*	FORCE	+0 35	_	*LARC	1	×	B SP	ENCER /NASA	*DMS	-DR-2091
Ť		AERODYNAMIC*	100 011021211		LEADING			*12		*LARC	-	4	D. E	POUCHER	*MAR	CH, 197
		TERISTICS *			FIGURATIO			*		+8-F00	T TRA	NSON*	-DMS		*	
7 0 0 0 B		ATED WITH V*		*	.,	*		+		*IC PF	RESSUR	E TU*			*	
		ONS IN THE *		*		*		*		*NNEL		*			*	
141,0		RY OF THE F*		*		*		*		*		*			*	
		PORTION OF*		*		*		*		*		4	:		*	
		LAR PLANFO *		*		*		*		*		*	:		*	
		S ON A .O1*		*		*		*		*		k			*	
		ALE LO-100 *		*		*		*		*		4	:		*	
		Y CONCEPT S*		*		*		*		*		*			*	
		HUTTLE ORBI*		*		*		*		*		*			*	
		THE LANGLE*		*		*		*		*		k	!		*	
		DT TPT (LA7*		*		*		*		*		*	!		*	
	*B)	# LEI (CAI		*		*		*		*		*	:		*	
	*6)	*		*		*		*		*		*			*	
С	- ***********	NITO STABIL *O	RBITER 139B (34	- *TO DE	TERMINE T	4F *	FORCE	*0.004	1 /	*LARC	1	*	DAVID	R. STONE/LA	*DMS	DR-2092
r T		CONTROL C*0			SONIC AER			*17.6	-	*LARC	-	*	RC		*NOV	., 197
'		ERISTICS OF*	' '		PERFORMA			*21.6			NCH HE	LIUM	ROBER	T MULFINGER	/ *	
2	*A O 00				IGITUDINAL			*		*TUNN!			RI		*	
<u> </u>		(34-0) ROCK+			AND STAT			*		*		*	M M	MANN	*	
^ 968		NTERNATIONA*			LITY AND			*		*		*	-DMS		*	
900		E SHUTTLE O*			AND DETER			*		*		*	!		*	
		VEHICLE 3 *			EFFECT	*		*		*		4	:		*	
		URATION (OA*			YNOLDS NU			*		*		k	:		*	
		TAD) NOLIANO			LONGITUDI			*		*		k	:		*	
	*-72)	·		*STAB		*		*		*		×	:		*	
	*			TOTAL.		*		*		*		*	:		*	
-	. ************************************	OF EVTERNATE	XTERNAL TANK, T	י מדינסי	WESTIGATE	TH*	FORCE	*0 004	1 /	*MSFC	1	4	E C	ALLEN/RI	+DMS	DR-2093
C ur	- TEFFEUL	NOCE CHARLA	XTERNAL TANK, T	145 551	ECT ON TH	F 1*	· ONGE	*0 6		*MSFC	_		-	SPARKS	*MAR	-DR-2093 CH, 197
ΤW		ROCKWELL *1			RATED VEHI			+4 96			VCH TR	I SON*	J L	GLYNN	*	ŕ
	/ TON THE	ATTONAL CDAWS	XTERNAL TANK, T					*		*IC W					*	
7B				**************************************	RISTICS OF	SF*		*		*					*	
134,0		TTLE VEHICL*5		*ACTE	TANK NOS	 *2 =		*		*		Я			*	
		INTEGRATED *S	KD, 312	*HAPES		. J? ±		*		*		k			*	
		URATION (IA+		THAPE	,	•		*		*		4	:		*	
	*37B)	**		•				*		+		4			*	
	*	4		**		"		-		-		-				

						WIND TO	JNNEL TES	т / р	MS DATA	PROCES	SSING					· 	138
, TES		REPORT		* * CONFIG * TE	URATIONS STED		TEST PURPOSE		TYPE OF		SCALE	* TESTII * AGENC	viG	* TE	COGNIZANT EST DMS PERSONNEL	* BASI *PUBLICA *OR COMM	TIONS
	- *1 /*A *E	I) OF THE	O.O2-SC ER WING MI-SPAN	*HZ INBD *HZ OUTBO *ROTATION *BASIC WI	AND 13 5 ELEVON IAL FREQ NG AND 1	*TAL FU *ARY DA *RANSON 1*REGIME	RE EXPERIMENTER BOUNTS IN THE SECOND THE SECOND IN THE SEC	UND* E T* T * ORT*		J*O 55 *1 3 * * *		*LARC *LARC *26-INCH *NIC BLOV *UNNEL	TRANSO	*A T *-DMS	AEL A KOTCH KAVANAUGH		
MSFC		_	GATION	*ROTATION * *ORBITER	IAL FREQ	* * *VERIF	EDICTIONS THE STAI	* * BIL*FO		* * * *0 6		* * * *RI	•		ULFINGER /		
	/*A *C ,404*0	ND CONTRICTERISTIC	HICLE 4	* *		*HARACT	ND CONTROI FERISTICS EHICLE 4 GURATION	OF*		*4.96 * * *		*MSFC *14-INCH *IC WIND *	TRISON	I+ONAL .*D A *M M	MANN	* * * *	1974
LARC 8VDHT 644	* - *H - *T	S OF AN		*	4M3V5W97	*TRY HE	N ORBITER EATING DIS			* * \$+0 006 *8 0 *8 0	-	+ * +LARC *LARC *MACH 8	-	*KWEL	WALSTAD/RO L INTERNATIO		
0H13	*0 *0 *0	E SHUTTL COUPLE MC O) IN THE	E THERMO DEL (41- LANGLEY CENTER	* * *		*ORRELA	ATE PHASE PAINT DATA HERMOCOUP	CH* A W∗		* * *			TY HYPE	*P L		* * *	
	*V *T		DENSITY			* *		*		*		*		*		*	

ORIGINAL PAGE IS

								۷	VIND	TUNN	EL TE	ST /	DMS	DATA	PROC	ESSI	NG							139	,
	*				*				<i></i> r			*			+MOD!	 EL	*			*		COGNIZANT	* BAS		
TEST	*				*	CON	FIGURAT	IONS *	k	Т	EST	*	TYP					TES		*		TEST DMS	*PUBLIC		,
ID	*	REF	ORT	TITLE	*		TESTED			PUR	POSE	*	TE	ST	+MACI	4 RAN	NGE +	AGE	NÇY	*		PERSONNEL	*OR COM	IMENTS	
RLAD	- +(CONTI	MUFI	D TNVFS	STT * 1	40A/	B SSV OI	RBITE:	CONT	FINUE	STUD	IES *F	FORCE		*0 04	105	/ *1	٧R	1	*	R	MENNELL/ROCK	WE*DMS-DR	-2097	
WT				IN THE							D DN				*0 2	-		NRLAD				INTERNATIONA	L *JUNE,	1974	0
5				PEED W.				ж	KS 0/	416.	0A71A	, AN+	_		+0 2		*	LOW S	PEED			M MANN	*		- 71
\62A				NTO THE				ж	D OA	471C	FOR O	PTIM*			+		*	TUNNE	L	*	-DM	S	*		
				OF THE				*	IZIN	NG TH	E AIR	BRE*			4		*			*			*		~
,				ING PRO				ж	KATHI	ING P	ROPUL	*NOIS			*		*			*			*		\simeq
				STEM OF				k	SYST	TEM (ABPS)	AN *			*		*			*			*		POOR
				UBSONI				*	D II	VEST	IGATÉ	THE*			*		*			*			*		
				Y AND	-						MIC E				*		*			*			, *		YTILAUG
				RACTER				4	TS C	OF VA	RIOUS	NAC*			*		*			*			*		<u></u>
		ics (-		*						BER/L				*		*			*			*		4
	*	(—		*			4	ION	CONF	IG. O	N TH+			*		*			*			*		-
	*				*			-	E OF	RBITE	R STA	BILI+			*		*			*			*		
	*				*			4	KTY A	AND C	ONTRO	L CH*			*		+			*			*		-
	+				*						STICS				*		*			*			*		
	*				*			k	k			*			*		*			*			*		
С	- *1	4EAT	TDA	MSEED	TFS*B	1005	D7F4M3V	5W87 v	*PARA	AMETR	TCALL	Y IN*I	HEAT-	TRANS	*0 00	90	/ */	ARC	/	*	D ·	G WALSTAD AF	ND*DMS-DR	-2098	
5HWT	- +	TS OF	: A	0 006	-SC*8	1005	D7F4M3V	5W87T×	kVFST	TIGAT	E THE	ASC*			*5 3	-		ARC	-			J GRIFALL/!		1974	•
2				-SKIN S			577 40 1				ING O				*5 3		*;	3 5-F	OOT F	HYPER*	OCK'	WELL INTERNAT	TI*		
15							D7F4M3V								*					*NUT C			*		
				IN TH			D / 1 4 1 1 0 1 1		*CLE			*			*		*1	NEL		*	Т	L. LOCKMAN/AI	RC*		
- 134,		• • • •		FOOT HI								*			*		*			*	Ť	L. MULKEY	*		
		AT M=		1001 111		0						*			*		*			*	В	W. MYERS	*		
	· · ·	4 1 141~	5 5						r. k			*			*		*			*	-DM	S	*		
	- A											*			*		*			*		-	*		
-D-0			BEDI	ORT FOR	7 T 40	2-OT			LUEAT	T TDA	NSFER	EEE+I	HEAT-	PHANC	+0 0	175	/ */	AEDC	/	*	Τ.	F FOSTER, W	*DMS-DR	-2099	
DC ITB	_			THE HE		2-01			ECTS		MADI CK	<u></u>	11LM 1		*8 0			AEDC	<u>_</u>			GRIFALL /ROCK			
				EFFEC						3		sk.			+8 0				SONT	WIN*			*FEB	1975	j
352															*			D TUN				A SARVER	*		
14B				.0175-1											*		*					J. FRICKEN	*		
-134,				ELL IN [.] Space								•			*		*				-DM		*		
									r L						*		*			*		-	*		
				HICLE !											-					*			*		
	-			IN TH					₹ 4.								- A			**			*		
				NCH B	MT1/1*			,	T.			- A			 -		- T			*			*		
	+[UT C	INEL		*			,	,			*			т -		- L			- -			*		
	*				*			,	*			*			-		•			7			•		

			WIND TUNNEL	TEST / DMS C	DATA PROCESSI	NG		· 		140
	*	*	*	+	*MODEL	*	*	COGNIZANT		SIC
TEST	*	+ CONFIGURATIONS	* TEST	* TYP	OF * SC	CALE* TESTING	*	TEST DMS		CATIONS
ID	* REPORT TITLE	* TESTED	* PURPOS	SE * TES	ST *MACH RA	NGE* AGENCY	*	PERSONNEL	*OR CO	MMENTS
AEDC	- +DATA REPORT FOR	R T*22-DT	*HEAT TRANSF	ER EFF*HEAT-1	TRANS+0.0175	/ *AEDC /		F. FOSTER, W		
HWTB	- *ESTS ON THE HEA	\T *	*ECTS	*	*8.0 -	*AEDC -		GRIFALL/RDCKW		
VA352	/*TRANSFER EFFECT	rs *	*	*	+8.0	*HYPERSON]			*FEB ,	1975
OH4B	*OF THE 0 0175-9	SCA*	*	*	*	*D TUNNEL		A. SARVER	*	
CR-134,	438*LE ROCKWELL INT	TER*	*	*	*	*		J FRICKEN	*	
	NATIONAL SPACE	SH	*	*	*	*	*-D	MS	*	
	+UTTLE VEHICLE N	MOD*	*	*	*	*	*		*	
	EL 22-OT IN THE	E A	*	*	*	*	*		*	
	*EDC 50-INCH WIN	ND *	*	*	*	*	*		*	
	*TUNNEL	*	*	*	*	+	*		*	
	*	*	*	*	*	*	*		*	
AEDC	- *DATA REPORT FOR	7 T*22-DT	*HEAT TRANSF	FER EFF*HEAT-	TRANS+0 0175	/ *AEDC ,		F FOSTER, W.		
HWTB	- *ESTS ON THE HEA	4 *	*ECTS	*	*80 -	*AEDC		GRIFALL/ROCK		
VA352	/*TRANSFER EFFECT		*	*	*8 0	*HYPERSON:			*FEB ,	1975
OH4B	*OF THE O 0175-9	SCA*	*	*	*	*D TUNNEL		A. SARVER	*	
CR-134.	439*LE ROCKWELL INT	TER*	*	*	*	*		J. FRICKEN	*	
	*NATIONAL SPACE		*	*	*	+	*-0	MS	*	
	*UTTLE VEHICLE N		*	*	*	*	*		*	
	*EL 22-0T IN THE		*	*	*	*	*		*	
	*EDC 50-INCH B V		*	*	*	*	*		*	
	*D TUNNEL	*	*	*	*	*	*		*	
	*	*	*	*	*	*	*		*	
AEDC	- *PHASE CHANGE PA	AIN*ORB (VL70-000139)*DETERMINE	INTERFE*HEAT-	TRANS*0 0175	/ *AEDC		QUAN, C. CRAIG/		
HVTB		<pre><we* (vl78-00041)<="" et="" pre=""></we*></pre>			*8.0 -	+HYPERSON	IC WIN*M	M. MOSER JR.	*JUNE,	1974
VA289		A *AND ORB ALONE	+HEATING RAT		+8 O	*D TUNNEL	(B) *-E	MS	*	
OH3A	+ND DRRITER ALON	NE *RI ORBITER (VL70			*	*	*		*	
OH3B	*CONFIGURATIONS		*CONFIGURATI	TON AND*	*	*	*		*	
CR-134.		*	*ON AN ORBI		*	*	*		*	
OK 154,	*	*	*ONE.WITH A		*	*	*		*	_
		Se	*OUT TPS TI		*	*	*		*	00
	*	yk.	*LATION.	*	*	*	*		*	T1 2
		''e she	*	*	*	*	*		*	eq+1 (
	·•	**	•							of Poor
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										QUA

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					WIND	TUNNEL T	EST /	DMS DATA	PROCE	SSING					141
			 *		*		*		*MODE!	 L	*	*	COGNIZANT	* BASIC	3
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	+	SCALE	* TESTING	*	TEST DMS	*PUBLICAT	LIONS
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE		TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COMME	ENTS
LARC		HEAT TOANSEED &	 >HA *	B17C7M4F5W103E22V	*DETE	RMINE TH	 F FFF+1	IFAT-TRAN	S* 0.00	0593/	*LARC /	*R	JONES. T. C	REE*DMS-DR-2	2101
8VDHT		SE CHANGE PAIN				OF VARI			*8 O		*LARC -	*L.	P. LAWING/N	ASA*JAN ,	1974
				B17C7M4F5W104E22V					+B O		*MACH 8 VARIAB	L*M	QUAN, W DY	E, *	
		ROCKWELL				RATIONS (*		*E-DENSITY HYP	E*J	CUMMINGS. H	G∗	
0H42A				B17C7M4F5W106E22V					*		*RSONIC TUNNEL				
0H42B		ORBITER IN THE				ING RATE			*		*		G RICH/RI	*	
0H42C				B17C7M4F5W106E22V					*		*	+Ď	A. SARVER	*	
		RIABLE DENSITY				ITION DU			*		*	*G	G. MCDDNALD	*	
CK-104,		WIND TUNNEL				LATED EN			*		*	* - D	MS	*	
	*	WIND TOWNEL	*		*ONDI		*		*		*	+	_	*	
					+	. 20.10	*		*		*	*		*	
ARC	_ 4	RESULTS OF INVE		DT+1 +D1+ A1+F	*FFFF	CTS OF V	AR TOUR	FORCE	*0.010	0 /	*ARC /	*M.	T PETROZZI	. M+DMS-DR-2	2102
		IGATIONS ON A		-, -,		EVON. RUI		01100	*7 3		+ARG -		D MILAM /RI		
175		10-SCALE MODEL				CHING ST			* 7 3		+3 5-FOOT HYPE	R* .	A MELLENTHII	V /*	
1/5 IA15	•	THE	01-1			. FAIRIN			*		+SONIC WIND TU			*	
		CONFIGURATION (3 GT			MAIN PRO			*		+NEL		A. SARVER	*	
CK-134,		PACE SHUTTLE DE				DCKET PL			+		+		G. MCDDNALD	*	
		TER AND EXTERNA				DNGITUDI	- · · - · -		*		*	*-D	MS	*	
		TANK IN THE NAS				ATERAL-	*		*		*	*		*	
		AMES RESEARCH (CTIONAL			*		*	*		*	
		TER 3 5-FOOT H				CHARACT			*		*	*		*	
					*ICS	CHARACH	*		·		*	*		*	
		RSONIC WIND TUN L (IA15)	71VE 4		.103						*	*		*	
	*	- • • • • • • •			T				·		*	*		*	
wara			·	(034)(T9)(S12)(PT		DMTNE EE	EECT +I	DDCE	· ^	004	*ROCKWELL/	*F	C. ALLEN/ROC	<pre><we*dms-dr-2< pre=""></we*dms-dr-2<></pre>	2103
MSFC					*DC C	ULL LENG	TU ODA	OKOL			*MSFC -		INTERNATION		
14TWT		RESULTS OF FAIR		(034)(T14)(S12)					*0.0.		*14-INCH TRISO				
589	•					AIRING O			*5 O		*IC WIND TUNNE				
TWT		LE MODEL ROCKWI				L FORCE			*		*TRISONIC WIND				
IA62F		SPACE SHUTTLE			*AVIA	L FUKUE	* *		*		*TUNNEL		E VAUGHN	*	
CR-134,		EGRATED VEHICLE			T		, ,		*		*	_	G MCDONALD	*	
		ERODYNAMIC CHAR			т .ь		-				*	*-D		*	
		TERISTICS AT MA			т.				٠ •		 vk	*	171.0	*	
		NUMBERS FROM O			*		*		4		+	*		*	
	*	TO 4 96 (IA62F)	, *		*		*		4					*	
	*	t	*		*		*		*		π-	~		•••	

				WIND TUNNEL TEST	/	DMS DATA	PROCES	SING					14:
	,	* *		*	*		+MODEL		*	*	COGNIZAN	ir *	BASIC
TEST	,	* *	CONFIGURATIONS	* TEST	*	TYPE OF		SCALE					LICATIONS
ID	:	* REPORT TITLE *	TESTED	* PURPOSE	*	TEST	*MACH			*	PERSONNE		COMMENTS
LAD	- ;	*INVESTIGATION OF *	140A/B SSV ORBITE	*ESTABLISH BASIC	L*F	DRCE	*0.040)5 /	*NR /	*1	R MENNELL/R	PI SPA*DMS	-DR-2104
IT	- ,	*SPACE SHUTTLE ORB*	R	*ONGITUDINAL STAR			*0 12		*NRLAD -		CE DIVISION		UME 01
		ITER SUBSONIC STA		*LITY CHARACTERIS	T*		*0 26				T. HUGHES/RI		Y. 1974
2B		*BILITY AND CONTRO*		*ICS IN AND OUT O	F*		*		*TUNNEL		E DIVISION	*	.,
134,1		L CHARACTERISTICS*	`	*GROUND EFFECT AN	*		*		*		M. MANN	*	
		*IN THE NAAL LOW *		*D LATERAL-DIRECT	I *		*		*	*	-DMS	*	
		SPEED WIND TUNNEL		*ONAL STABILITY C	H*		+		*	*		*	
	4	*(DA62B) *		*ARACTERISTICS IN	*		*		*	*		*	
	٦	*		+FREE AIR	+		+		*	+		*	
	4	*		*	*		*		*	*		*	
.AD	- >	*INVESTIGATION OF *	140A/B SSV ORBITE	*ESTABLISH BASIC	Ł∗F	ORCE	+ 0.04	105 /	*NR /	*	R MENNELL /	ROCK+DMS	-DR-2104
		SPACE SHUTTLE ORB*		*ONGITUDINAL STAB	I *		*0.12	-	*NRLAD -		WELL INTERNA		
· 		*ITER SUBSONIC STA*		*LITY CHARACTERIS	T *		*0 26		*LOW SPEED	WIND*	L / SPACE DI	VISIO*AUG	UST. 1974
2B		BILITY AND *		*ICS IN AND OUT	*		*		*TUNNEL	*1		*	·
134,1		CONTROL CHARACTER*		*OF GROUND EFFECT	*		*		*	**	T HUGHES /	ROCK*	
		ISTICS IN THE NAA*		*AND LATERAL-DIRE	C*		*		*		WELL INTERNA		
		*L LOW SPEED WIND *		*TIONAL STABILITY			*		*	*(L / SPACE DI	VISIÖ*	
	*	*TUNNEL (DAG2B) *		*CHARACTERISTICS	*		*		*	*	N	*	
	1	*		*IN FREE AIR.	*		*		*	*!	M M MANN	*	
	1	*		*	*		*		*	*	-DMS	*	
	Я	*		*	*		*		*	*		*	
C ·	- *	TRANSITION HEATIN*	ORBITER + EXTERNA	*TO INVESTIGATE A	S+H	EAT-TRANS	0 8*i	-	*LARC /	**	J CUMMINGS/	RI *DMS	-DR-2105
HT ·	- *	G RATES OBTAINED *1	L TANK, SSV MODEL				*8.0		*LARC -	*1	D A. SARVER	*SEP	T , 1976
	/*	ON A MATED AND IS+4	41-0TS	*HE COMBINED TANK	*		*		*MACH 8 VA	RIABL*	J E. VAUGHN	*	
7		DLATED 0.006 SCAL+	EXTERNAL TANK ALO	*AND ORBITER	+		*		*E-DENSITY	HYPE*	-DMS	*	
144,5		E MODEL (41-OT) S+N		*	*		*		*RSONIC TU	WNEL *		*	
		PACE SHUTTLE ORBI*		*	*		*		*	*		*	
	*	TER AND EXTERNAL *(DRBITER ALONE, SS	i *	*		*		*	*		*	
		TANK IN THE NASA/*1	MODEL 41-OTS	*	*		*		*	*		*	
		LARC VARIABLE DEN*		*	*		*		*	*		*	
		SITY HYPERSONIC T*		*	*		*		*	*		*	
	*	UNNEL *		*	*		*		*	*		*	
_	*	* *		*	*		*		*	*		*	-DR-2106 , 1975
		SUPERSONIC DYNAMI*				ORCE	* 016	5 /	,		C FREEMAN		-DR-2106
		C STABILITY DERIVAS	· —	*TABILITY DERIVAT	_		*		*LARC -	*.	. BOYDEN, E	E DA*JAN	, 1975
		ATIVES OF A MODIF*		*VES	*		*				VENPORT/LARC		
4A		* TED 089B		*(SEE ALSO LA-20			*		*IND TUNNE		J. E VAUGHN		
14B	*	SHUTTLE ORBITER *		*OR LOW MACH NO D	۸*		*		*		J. E VAUGHN	*	
X	*	*		*TA)	*		*		*	* •	-DMS	*	
2630	*	*		*	*		*		*	*		*	
	*	*		*	*		*		ı			•	

					WIND	TUNNEL	rest /	DI	MS DATA	PROCE	SSIN	G								143
	*		*		*		,			*MODE	L	*			*	CI	DGNI ZANT	*	BASI	С
TEST	*		*	CONFIGURATIONS	*	TEST	*		TYPE OF	*	SCAL	LE*	TEST	ING	*		ST DMS		BLICA	
ID	* R	EPORT TITLE	<u>*</u>	TESTED	*	PURPOS	Ξ ,	τ	TEST	*MACH	RANG	GE*	AGEN	CY	*	PI	ERSONNEL	*OR	COMM	ENTS
																		•		
LARC	- *\$UB	SONIC AND T	ran+o	89B ORBITERW/MOD	*MEAS	URE DYN	AMIC S	FO		* O1				/			FREEMAN/N			
8VDHT	- *SON	IIC DYNAMIC	STA*	NOSE	*TABI	LITY DE	RIVATI	•		*.3	-		LARC	-		-LAR		*MA	RCH,	1975
653	/*BIL	ITY DERIVAT	TIVE*		*VES		•	•		*12							VAUGHN	*		
LA2O	*S 0	IF A	*		*(SEE	ALSO LA	4-14 T	r		*							VAUGHN	*		
TM-X	*MOD	IFIED 089B	SHU*		*EST	RESULTS	FOR H	-		*		+	RSONIC	TUNNE	*-	OMS		*		
72631	*TTL	E ORBITER	*		* IGHE	R MACH I	NO DA			+		*			*			*		
	*		*		*TA)		,	-		*		*			+			*		
	*		*		*		,	<		*		+			*			*		
LARC	- +RES	ULTS OF TES	STS +B	26C9E26F8M7N25R	5*OBTA	IN LOCAL	L PRES	FO	RCE	+ 0 0		•	LARC	/			THORNTON	-		
UPWT	- *(OA	64 AND IA35	A*D (∂	1116	*SURE	DISTRI	3UT I ON ³	•		*2 5	-		LARC	-	_		H SPANGLE		Υ,	1974
1063	/*F A	N 0.015-SCA	LE *B	26C9E26F8M7N25R	5∗s ON	ORBITE	R FUSE	•		*4 5							ELL INTERN	AT*		
IA35		EL (36-0TS)				TO SUPI				*		*	IND TU	NNEL		ONAL		*		
OA64	*THE	SPACE SHUT	TTL *		*ENTI	NG STUD	IES AN	t		*		*			_		MYERS	*		
CR-134,C	084*E C	ONFIGURATIO	N 1*		*D TO	DETERM:	INE EF	t		*		*			*-	OMS		*		
	+40A	B IN THE N	VASA*		*FECT	OF ELE'	VON DE:	•		*		*			*			*		
	/LA	RC UNITARY	PLA		*FLEC	TIONS II	V THE	•		*		*			*			*		
	*N W	IND TUNNEL	*		*AFT	PORTION	OF TH	•		*		*			*			*		
	*		*		*E OR	BITER F	JSELAG'	•		*		*			*			*		
	*		*		∗E		,	•		*		*			*			*		
	*		*		*		,	-		*		*			*			*		
LARC	- +ENT	RY HEAT TRA	NSF * 1	47B CONFIGURATIO	ם סדיכ	ETERMIN	E THE ?	HE	AT-TRANS	S+6 0	-		LARÇ	/	*∪		FOUST,RI		IS-DR-	
CF4	- *ER	TESTS OF TH	HE O+N	ORBITER MODEL	(*EFFE	CTS OF	THE LO	t		*6.0		*	LARC	-	*R		MIDDEN, LA	RC*JA	Ν.,	1976
		6-SCALE SPA				EON SPE				*		*	FREON	TUNNEL	_		VAUGHN	*		
OH45		ITTLE (- 147E			*HEAT	RATIO	ON THE	٠		*		*					LINDAHL	*		
CR-141.E		TER MODEL (•		*HEAT	ING DIS	TRIBUT	t		*		*			*-1	OMS		*		
		IN THE LANG			*IONS	AND TO	DETER'	•		*		*			*			*		
	- •	EARCH CENTE			+MINE	THE IM	PINGEM	-		*		*			*			*		
		ON TUNNEL A			*ENT	OF THE	ORBITE'	•		*		*			*			*		
		6 (OH45)	*		*R B0	W SHOCK	ON TH	•		+		*			*			*		
	*	, ,	*		*E WI	NG	2	•		*		*			*			*		
	*		*		*		•	k		*		*			*			*		

						WIND	TUNNEL TES	г /	DMS DATA	PROCES	SSING					. = = = = = = = = = = =	144
	*		,	*		*		*		*MODE1	 L	*		* (OGNI ZANT	* BASIC	 G
TEST				· CO	NFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TE	STING		ST DMS	*PUBLICAT	
ID	*	REPORT TI	TLE ,	k	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AG	SENCY	* [PERSONNEL	*OR COMME	ENTS
LARC	- *	HEAT TRANSF	ER TES	ORRI	TER CONFIGURA	אדח ר	BTAIN ASCE	\IT + ∐	EAT_TOANS	** ^	_	*LARC	. ,	*D C	WALCTAD /	DO+DMC DD 6	140
CF4	~ *	TS OF AN O	006-SC	TION	1 2A	*HFAT	ING DATA A	γι α* Τα*	CAT-TRANS	*		*LARC				RO*DMS-DR-2 IO*JAN.,	
97-118	/*	ALE THIN-SK	IN SPA	EXTE	RNAL TANK	+OND1	TIONS SIMU	.ΔT*		*			, IN TUNNEL	*NAL	L INSCRINAT	10* OAN.,	1970
IH18	*	CE SHUTTLE	,	k			REAL GAS	*		*		*	AT TOMILE		VAUGHN	*	
CR-144,	589*	THERMOCOUPL	E MODE	þ			CTS AT HYPI	ERS*		*		+			MANN	*	
	*	L (41-OT) I	N THE	r			MACH NUMBI			*		*		*-DMS	141414	*	
	*	LANGLEY RES	EARCH *	k		*		*		*		*		*		*	
	*	CENTER FRED	N +	ķ		*		*		*		*		*		*	
		TUNNEL AT M	l = 6 (*	•		*		*		*		*		*		*	
	*	IH18)	×	*		*		*		*		*		*		*	
	*		×	•		*		*		*		*		*		*	
MSFC	~ *	REENTRY AER	*MANY GO	MODE	L 449/CONF NE	3+TO E	VALUATE STA	ATI*F	ORCE	*0 563	3 /	*LARC	/	*J D	JOHNSON	*DMS-DR-2	2111
14TWT	~ *	IC CHARACTE	RISTIC*	RE1,	NBREIA, NBRE	*C AE	RODYNAMIC S	STA*		* 0 6	-	*MSFC		*W. F.	. BRADDOCK/	'NS*NOV.,	1974
590/595	/*	S OF A SPAC	E SHUT*	1B,	NBRE 1S 1ELT	*BILI	TY OF AN SE	₹B *		+4 96		*14-1	NCH TRISO	N+I	·	*	
SA26F	*	TLE SOLID R	OCKET +			*		*		*		*IC W	IND TUNNE	L∗J E	VAUGHN	*	
CR-134,		BOOSTER MOD				*		*		*		*		*-DMS		*	
		TESTED IN M				*		*		*		*		*		*	
	*	4 X 14 INCH	TWT +	,		*		*		*		*		*		*	
	*		*			*		*		*		*		*		*	
AEDC	- *	AERODYNAMIC	RESUL+	INTE	GRATED VEHICL	.*DETE	RMINE PROXI	[MI+F	ORCE	*0 01		*ROCK	WELL/	*J J.	DAILEDA/RI	*DMS-DR-2	2112
SWTA	- +	IS OF WIND	TUNNEL*	E (C	ONFIGURATION					*4 5	-	*AEDC	-	*√ E	VAUGHN	*NOV.,	1974
VA422		SEPARATION				-	FOR ORB AND) E*		*			RSONIC WI		. VAUGHN	*	
IA57	*	DN A O 01-S	CALE *	!			AND SRB	*		*		*D TL	INNEL (A)	*-DMS		*	
CR-134,		MODEL (32-0					ID W/O SEPAR			*		*		*		*	
		ACE SHUTTLE					ROCKETS FIR	≀IN*		*		*		*		*	
		RATED VEHIC	LE (IA*	!		*G.		*		*		*		*		*	
		57)	*			*		*		*		*		*		*	
1.400	*		*	: 		*		*		*		*		*		*	
LARC CFHT		EFFECTS OF					IN DETAILED		ORCE	* 0 01			•			K *DMS-DR-2	2113
		ON CONTROL					TS DN SSV H			*10 3		*LARC			2 - Մ. Մ. D		1974
101 0A85	•	JET FLOW FI					NIC AERODYN			*10.3					, J MARROQ	UI*	
		NTERACTIONS					ND STABILIT			*			PERSONIC			*	
CR-134,		E AERODYNAM					CONTROL CHA			*		+UNNE	L		. MOSER JR.	*	
		RACTERISTIC					ISTICS OF F	-		*		*		*-DMS		*	
		O 010 SCALE					FLOW FIELD			*		*		*		*	
		E SHUTTLE OI					ACTION WITH			*		*		*		*	
		MODEL IN TH GLEY RESEAR					OCAL VEHICE	.t *		*		*		*		*	
		TER 31-INCH				*rLU₩	FIELD.	*		本		*		*		*	
	*		OLUI #			*		**		*		*		*		*	
	*		*			*		*		*		*		*		*	

		WIND TUNNEL TEST	/ DMS DATA	PROCESSING			145
* * TEST * * ID * REPORT TITLE *	CONFIGURATIONS TESTED	*	* + TYPE OF + TEST	*MODEL	* * * E+ TESTING * E+ AGENCY *		* BASIC *PUBLICATIONS *OR COMMENTS
NRLAD - *AERODYNAMIC INVES*B3 LSWT - *TIGATIONS INTO VA*8V 716	1116E26V8R5X9 IOA/B I9C7F5J59W107E23 PR5X20 + NACELLE	*VARIOUS BASE DRA *REDUCTION TECHNI *QUES IN AN *ATTEMPT TO IMPRO *E L/D RATIOS AND *TO CALCULATE STI *G INTERFERENCE *EFFECTS * *VERIFY SUPERSONI *STABILITY AND CO *NIROL CHARACTERI *TICS, VERIFY CON *ROL SURFACE EFFE *TIVENESS AND INV *STIGATE REYNOLDS *NUMBER EFFECT * *EFFECT OF THREE *IR BREATHING PRO *ULSION SYSTEM FE	G* * * V * * N* * * * * * * * * * * * * * *	*0 2 - +0 2 * + * * * * * * * * * * * * * * * * *	**NRLAD - ** **LOW SPEED WIND* **TUNNEL ** * * * * * * * * * * * * * * * * * *	D A SARVER G G MCDONALD -DMS M T. PETROZZI AM D M D MILAM/ROM KWELL INTERNATION AL U A MELLENTHIN AMES RESEARCH CEN TER B W MYERS -DMS H. C SMITH /RI D. A. SARVER G G. MCDONALD -DMS	C*MARCH, 1974 N* * /*

								WIN	D TUNNEL TEST	1 / 0	MS DATA	PROCES	SING						146
		٠				*		*		*		*MODEL		*		*	COGNIZANT		BASIC
TES		*				*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TEST	ING		TEST DMS		PUBLICATIONS
IĐ		*	REPOR	T TI	TLE	*	TESTED	*	PURPOSE	*	TEST			* AGEN		*	PERSONNEL		OR COMMENTS
LARC	-	*T	RANSIT	ION	HEATI	N*B:	22C7F5M4V7W111	*PE	RFORMED TO DE	ETE*HE	AT-TRANS	s* 00e	. /	*LARC	,	*.I (CHMMINGS/PD	CKM*	DMS-DR-2117
BVDHT	-	*G	RATES	DET	ERMIN	E*		*RM	INE TRANSITIO	3N *		*8 0		*LARC	<u>-</u>				SEPT . 1976
548		/+D	ON A	0 00	6 SCA	L*			ATING RATES &			+8.0					RAPARELLI/R		
DH 14		*E	SPACE	SHU	TTLE	*			IHIN SKIN	*		*					L INTERNATION		
CR-147	,61	7 * O	RBITER	MOD	EL (N	0+			ERMOCOUPLES	*		*		*RSONIC			L TIMICKIMALI.	OINA '	`
			50-0)					*		*		*		* KOOMIC	IOMAGE	_	G MCDONALD	7	
			A/LARC					*		· ·		T.		1					•
		*R	IABLE (DENS	ITY	*		*						*		*-DMS	5	*	•
			IND TU			*		*				_		*		*		*	•
			0H14)		, 40,	*		4				₹		*		*		*	•
		*	,			*		T.				*		*		*		*	*
ARC	_	* Ω	FSIII TS	OF '	TDANIC	O + Ma	ATED INTEGRATED	*1 O	10 AND LAT	* * * * * * * * * * * * * * * * * * *		*	_ ,	*		*		*	*
STPT	_	*N	TC WINI	יט. דוו	MVIET .	T + 1/1	EHICLE MODEL(67	* LUI	NG. AND LAI -	-ภา*เก	IRCE	* 0 01		*ROCKWE	•	*R F	HARDIN/ R.	BUR +	DMS-DR-2118
67		/ v E	STS ON	AN	0 015	1 A I	EUICEE MODEE(8).					*O 6		*LARC	-		S- ROCKWELL	. *	AUGUST, 1974
EA41	•	40	CALE SI	AN '	0.015	**	15)		RING CONFIG E	3U1 *		*1 20					E. VAUGHN	*	•
	10								-UP.	*		*			SSURE T	U∗Ų €	E. VAUGHN	*	r
JK * 134	, 10		HUTTLE						EE ALSO IA42A			*		*NNEL		*-DMS	S	*	•
			CLE MOL			-			ST RESULTS FO			*		*		*		*	x
			IN THE						GHER MACH NO.	. *		*		*		*		*	•
		***	TPT TC	(IA	41)	*		*DA	TA)	*		*		*		*		*	•
		*				*		*		*		*		*		*		*	•
.ARC	-	*51	JPERSON	AIC .	rests	*CC	ONFIGURATION 4 N	/+TO	OBTAIN AEROD)YN*FO	RCE	*0 015	, /	*ROCKWE	LL/	*R. F	HARDIN, R	BUR*	DMS-DR-2119
JPWT		+01	F AN O	015	-SCAL	E*A7	ED SSV (67-OTS)) * AM3	C FORCE DATA	*		*16	-	*LARC	-	*ROWS			AUGUST, 1974
056/1	073,		PACE SH					*		*		*4.6		+UNITAR	Y PLAN	₩*D. /	A. SARVER	*	
A42A			ED VEHI					*		*		*		*IND TU			E VAUGHN	*	ı
A42B			37-OTS)					*		*		*		*		*-DMS		*	
R-134	, 109)*L/	ARC UPV	VT TO	OBT/	Δ *		*		*		*		*		*	•	*	•
		* I !	4 AEROC	IANYC	MIC FO	" *		*		*		*		*		*			
		*R(CE DATA	1		*		*		*		*		*		*			•
		*				*		*		*		*		*				-	
.ARC	-	*W]	IND TUN	INEL	TESTS	S*06	RITER	* F F F	ECT OF SPEED	IBD*EU	DCE	* 0.01	5 /	*R.I	,		SPARKS	· ·	DHC DD 0400
TPT			AN O.						E AND BODY FL			*0.35		*LARC	/				DMS-DR-2120
68			CONFIC					*	- MNO 0001 FL	.AF *		* 1 2			TDANCO		MOSER JR	*	JAN , 1975
A 106			DA/B SF					•				* 12		*8-F00T			>	*	•
			ORBIT					*		.as uu		T.		*IC PRE	SOURE I	*د		*	1
			57-0) 1					<u>.</u>		45		*		*NNEL		*		*	
		*1	/LRC 8-		IL TOT			↑		*		*		*		*		*	,
								π		*		*		*		*		*	1
			OBTAI					*		*		*		+		*		*	1
			AEROD		, -			*		*		*		*		*		*	;
		*R(CE DATA	(0)	106)	*		*		*		*		*		*		*	!
		*				*		*		*		*		*		*		*	:

							WIND	TUNNEL TEST	/	DMS DATA	PROCE	SSING			_				147
	:	*			*		*		*		*MODE	 L	*		*	COGNIZANT		* BAS	IC
TEST	٠.	*			* C	ONF IGURATIONS	*	TEST	*	TYPE OF	*	SCAL	E*	TESTING	*	TEST DMS		*PUBLIC	ATIONS
ID		*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	rest	*MACH	RANG	E*	AGENCY	*	PERSONNEL		*OR COM	MENTS
.ARC						K CANCELLED, (J*TEST	r cancelled.	J∗F	FORCE	* 0 0					P. PHILLIPS		*DMS-DR	-2121
TPT	- '	* ΔM	IC INVE	STIGATIO	3∗ULY	, 1975	+ULY	1975	*		*0 35	-		ARC ~		C FREEMAN.			1.50
69	_ /·	*N	OF CONF	IGURATIO)*		*		*		*1 2			-FOOT TRANS				*CANCEL	
A8EA		+N	MODIFIC	ATIONS	*		+		*		*			C PRESSURE "				∗JULY,	1975
		+T0	RI-140	A/B FOR	*		*		*		*		*N	NEL	*-[)MS		*	
	,	*EX	TENDING	CENTER	*		*		*		*		*		4:			*	
		*OF	GRAVIT	Y RANGE	*		*		*		*		*		*			*	
	,	*			*		*		*		*		*		*			*	
RLAD	- ,	*IN	VESTIGA	TION OF	*LAU	NCH CONFIGURAT	F*QUAI	LIFY A NEW EX	XT*F	PRESSURE	*0 01	5 /	*R	1 /		L. ROGGE /			
TWT	- :	*SP	ACE SHU	ITTLE LAL	I+ION	(MODEL 67-OTS	S*ERN/	AL TANK NOSE	C*F	FORCE	* 1 1	-		RLAD -		LL INTERNAT	IONA	*DEC ,	1974
80				LE EXTER		•		IGURATION	*		*1 2			-FOOT TRISO				*	
469				NOSE CON			*		*		*		+C	WIND TUNNE!	_ *D	A SARVER		*	
				N EFFECT			*		*		*		*		٧V	W SPARKS		*	
,				67-OTS)			*		*		*		*		*-[MS		*	
				CKWELL I			*		*		*		*		*			*	
				NAL 7- E			+		*		*		*		*			*	
				TRISONIC			*		*		*		*		*			*	
		-		IEL (IA6			*		*		*		*		*			*	
		*9)		icc (IAO	*		*		*		*		*		*			*	
		~ <i>]</i> /			*		*		*		*		*		*			*	
SFC		, Tue	cui te s	DOM TAIVE	 	NCH CONFIGURAT	C*ΩETI	EDMINE EFFECT	г *Е	PRESSIRE	* 0 0	04 /	+R	τ /	*W	GARTON / R	CCKW	*DMS-DR	-2123
5FC \$TWT				IS IN THE			*0E	GAS SUPPLY S	TD +5	FORCE	*0.9			SFC -		L INTERNATI			1975
						NCH CONFIGURA				ONOL	*2 99			4-INCH TRIS				*	
38						WITH STRUTS			*		*			C WIND TUNN				*	
A53	E04	* D E	0 004 3	CALE MU	11A I + 3	NCH CONFIGURA	T-PRAC!	E DOESSIDE EN			*		*			OMS		*	
K-141,	5 04	* "	L SPACE	SHULLE	. ↑L/IU L/ONI	WITH ORBITER	יטאטיו וחמוני	C LVESSOUF FI	Λ.C.Ψ.		*		*		*			*	
		TLA	DIVER VE	HICLE (*10M	T GAS SUPPLY	17E GI	MMCN13 DI 3FA	u -		*		*		*			*	_
							*VEH		1 T		*		+		*			*	유
				GAS SU		11/102	4 V E FT.	ICEE			4				*			*	
				JT EFFECT			-T				T		*		*			*	סב
				PRESSUR			τ* 								*			*	Q
				MENT (I	14		न र		** .s-		T		T L		4			*	OF POOR
		*53)		*		3F*		*		ж .ь		υ Τ		-			*	-0
		*			*		*		*		*		*		4			4.	0
																			QUAL
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	WIND TUNNEL TES	T / DMS DAT	A PROCESSING	i		148
				+	* COGNIZANT	* BASIC
* †	* No + Test	* TVDF (*MODEL	.E* TESTING	* COGNIZANI * TEST DMS	*PUBLICATIONS
TEST * * CONFIGURATIO		* TYPE (E* TESTING	* PERSONNEL	*OR COMMENTS
ID * REPORT TITLE * TESTED	→ PURPOSE	* TEST	MACH RANG	E' AGENCT	PERSONNEL	**************************************
ARC - *RESULTS OF TESTS *140A/B ORBITER	CO*DETERMINE SURF	ACE*PRESSURE	*10 /	+ARC -		
3.5HWT - +DA26 AND IA16 IN *NFIGURATION	*STATIC PRESSUR	!E *	+53 -	*3.5-FOOT HYP	PER*D D E THORNTO)N/*MAY, 1974
180 /*THE NASA/ARC 3.5-*VEHICLE 4 EXTE	RNA*DISTRIBUTIONS	ON *	*10 3	*SONIC WIND 1	UN+ROCKWELL INTER	VAT*
IA16 *FOOT HYPERSONIC *L TANK PLUS 14	OA/*THE ORBITER FU	ISEL+	+	+NEL	*IONAL	*
OA26 *WIND TUNNEL ON A *B ORBITER	*AGE, FOR BOTH	THE+	*	*	*B W. MYERS	*
CR-134,093*O 015 SCALE MODEL*	*ASCENT AND ENT		*	*	*-DMS	*
*(36-OTS) OF THE *	*FLIGHT PHASES,		*	*	*	*
SPACE CONFIGURATI	*O SUPPORT ORBI	. –	*	*	*	*
ON 140A/B TO OBTA	*VENTING STUDIE	:S *	*	*	* .	*
*IN PRESSURES FOR *	*	*	*	*	*	*
*VENTING ANALYSIS *	*	*	*	*	*	*
* *	*	*	*	7 / 4D/7 /	*DAVID R STONE	/N*DNC-DD-042E
LARC - *HYPERSONIC STABIL*BODY ALONE (-1			*0.004 / *18.1 =	′ *R/I / +LARC -	*ASA-LARC	*SEPT . 1974
22HT - +ITY AND CONTROL C+/B) 422 /*HARACTERISTICS AN+ORBITER (-140A	*RSONIC STABILI		*18.1 - *21 6		UM*P HAWTHORNE /F	
422 /*HARACTERISTICS AN*ORBITER (-140A OABB *D REYNOLDS NUMBER*	*CTERISTICS AND		†21 0 *	*TUNNEL	*J. E VAUGHN	*
CR-134.409*EFFECTS OF THE RD*	*REYNOLDS NUMBE		*	*	*J. E VAUGHN	*
CKWELL SSV 140 A/	*FFECT ON ROCKW		*	*	*-DMS	*
B ORBITER CONFIGU	*-140 A/B ORBIT		*	*	*	*
*RATION *	*	*	*	*	*	*
* *	*	*	*	*	*	*
LARC - *EFFECTS OF REACTI*TASK CANCELLED	. D*TEST CANCELLED). D*FORCE	+ 0.01 /	/ *LARC -	*TOM BLACKSTOCK	/N*DMS-DR-2126
CFHT - *ON CONTROL SYSTEM*EC . 1976	*ECEMBER 1976	*	*10 3 -	*CONTINUOUS-	FLO*ASA-LARC	*TASK
100 /*JET SIMULATION O *	*	*	+10 3	*W HYPERSONI	C T∗J. E VAUGHN	*CANCELLED
LA25 *N THE HYPERSONIC *	*	*	*	*UNNEL	∗J. E. VAUGHN	*DEC , 1976
PERFORMANCE. STAB	*	*	*	*	*-DMS	*
ILITY AND CONTROL	*	*	*	*	*	*
*CHARACTERISTICS *	*	*	*	*	*	*
*OF A .O1 SCALE *	*	*	*	*	*	*
*ROCKWELL INTERNAT+	*	*	*	*	*	*
IONAL 139B ORBITE	*	*	*	*	*	*
*R CONFIGURATION *	*	*	*	*	*	*
* +	*	*	*	+	*	*
LARC - *REYNOLDS NUMBER E*-139 B ORBITER			* 0.01 /		*PETER T BERNO	
CFHT - *FFECTS AT MACH NU*TH VARIOUS CON			*10 3 -	*LARC -	*J. E. VAUGHN	*JULY, 1974
102 /*MBER 10.3 ON AERO*L DEFLECTIONS	*ER AERO CHARA	NCTE*	*10.3		FLO*J E. VAUGHN	↑
LA35 *DYNAMIC *	*RISTICS ,	*	*	*W HYPERSONI	5 1*-DM2	ጥ ታ
TM-X *CHARACTERISTICS O*	*	*	*	*UNNEL	र 	1 ★
71954 +F 01 SCALE 139-B*	*	*	*	*	* *	*
*ORBITER *	*	*	*	≁	~ •	*
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QUALITY			
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						WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING						149
TEST	· ,	- · · /	·	* * *	CONFIGURATIONS	* *	TEST	+ *	TYPE OF	*MODEI		* * TE	STING	*	COGNIZANT TEST DMS	* BASI	
ID	•	REPOR	RT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANG	* AG	ENCY	* 	PERSONNEL	*OR COMM	MENTS
								~~.=			,	* 100	,	JL BE A COL	K E NICHOLS	/+nMc_nn_	-0128
ARC			GATIONS		140A/B		PRIMARY TE		ORCE	+0 03		*ARC *ARC	-	*MARI	CE NICHOLS	*VOLUME	
11TWT			BO-SCALE				CTIVES ARE			*0 6	-		OOT TRAN		a MANNI	*AUGUST.	
747			UTTLE VE				TAIN CONFIG			*1 2			WIND TUN			*A00031,	1374
OASSA			NF I GURAT I					*		*					•	±	
CR-134,			ORBITER				ILITY AND C			*		*E (U	NITARY)	· ·		- T	
			THE AMES				CHARACTERI	_		*		*		# -		*	
			1 CENTER1				CONTROL SU			*		*					
			OOT SUPER				EFFECTIVENE:			*		*		*		*	
			NUT DNI	1EL*			ROL SURFACE			*		*		*		*	
	,	r(OA53A))	*			MOMENTS, A			*		*		*		T	
	,	۲		*			ICAL TAIL P.	Α *		*		*		*		*	
	3	۲		*		*NEL	LOADS	*		*		*		*		*	
	,	۲		*		*		*		*		+		*		* '.DMG_DD	0400
ARC	- ;	INVEST	GATIONS	ON*	140A/B	*THE	PRIMARY TES	r *F	ORCE	+0 03		*ARC	/		K E. NICHOLS		
11TWT		AN O OS	30-SCALE	S *			CTIVES ARE			*0 6	-	*ARC	_	*RI		*VOLUME	
747	/ •	PACE SH	AUTTLE VE	HI*		*0 0B	TAIN CONFIG	IJR⊀		+1.2			DOT TRAN			*AUGUST.	1974
OA53A	,	CLE CON	NF I GURAT I	*N0.1		*ATIO	N 140A/B	*		*			WIND TUN		5	*	
CR-134.	115	140A/B	ORBITER	MO+		*STAB	ILITY AND C	0N+		*		*L (U	NITARY)	*		*	
			THE AMES			*TROL	CHARACTERI	ST∗		*		*		*		*	
			H CENTER			*ICS.	CONTROL SU	RF*		*		*		*		*	
			OOT SUPE			*ACE	EFFECTIVENE:	5S*		+		*		*		*	
			VIND TUNN			*CONT	ROL SURFACE	H*		*		*		*		*	
		(0A53A)		*			MOMENTS, AN			*		*		*		*	
	,	k	•	*			ICAL TAIL P.			*		*		*		*	
		· •				*EL L	_	*		+		*		*		*	
		' '-				*	UNUS	*		*		*		*		*	
ADO			TANGET		SSV 140A/B LAUNCH		TH DDESSUDE	n*P	DESSURE	* 0 0	30 /	*ARC	1	*R. !	_ GILLENS /	R*DMS-DR-	-2129
ARC							IBUTIONS ON			*1 55		*ARC	<u>-</u>	*OCK		*VOLUME	
97SWT			OF AN O				RATED LAUNC		ONOL	*2 2			OT BY 7-		CHEE / ROCKW	EL*MAY.	1975
716			MODEL OF				CLE FORCE			*			UPERSONI		·····	*	
IA14B			CE SHUTTL				ERE TAKEN A			*					A SARVER	*	
CR-141,			140A/B			*!A W	CKC TANCIA N			•		+NITA		•	DAVIET	*	
			ONFIGURAT			7 U		- -		 		* 112.1 M	,,,,	*-DM		*	
		•	EL 47-0TS			T-		ı.		*		*		*	-	*	
			ARC 9- E			4 .t.		- -		 		*		*		*	
			UNITARY			*		* 		-r` -⊾				*		*	<u>.</u>
			TUNNEL_			*		**		र्ज		γ· 		→		*	
			1.55 AND	2*		*		*		7		ark .t.		± -		 	1
		1.2 (IA	148)	*		*		*		*		*		<i>∓</i> .t.		· ·	-
		*		*		*		*		*		*		*		4	-

						WIND	TUNNEL TES	Γ/	DMS DATA	PROCES	SING				150)
	*			*		*		*	*	+MODE!			*	COGNIZANT	* BASIC	
TEST				*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBLICATIONS	;
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	+	TEST	+MACH	RANGE	◆ AGENCY	*	PERSONNEL	*OR COMMENTS	
							~									
RC					SV 140A/B LAUNCI	H*08T.	AIN PRESSURI	E D*F	PRESSURE			*ARC /			/ R*DMS-DR-2129	
7SWT		ATION OF					RIBUTIONS OF			+1.55		ARC -		KWELL	*VOLUME 02	
16	•	-SCALE M					GRATED LAUN			*2.2				CHEE / ROCK	WEL*MAY, 1975	ز
414B		HE SPACE					ICLE. FORCE			*		OT SUPERSONI			*	
R-141.		VEHICLE					WERE TAKEN	ALS*		*		WIND TUNNEL	•		*	
		UNCH CON				*0		*		*	*	*NITARY)		T DAVIET	*	
		N (MODEL				*		*		*	k	k	*-0	MS	*	
		IN THE A				*		*		*	*	*	*		-*	
		7-FOOT U		-		*		*		*	*	*	*		*	
		AN WIND		_		*		*		*	*	*	*		*	
		R MACH 1		2*		*		*		*	1	*	*		*	
	*	.2 (IA14	В)	*		*		*		*	4	*	*		*	
-0	*	47010100		*		*		- *		*		*	*_		*	
RC			-		SV 140A/B DRBIT			,		+0.030		*ARC /			/ R*DMS-DR-2130_	_
TWT		ATION OF		-			RIBUTIONS OF		PRESSURE	-		*ARC -		KWELL	*MAY, 1975	j
16		-SCALE M					TER ALONE.			*0 9				CHEE / ROCK	MEL*	
422A		HE SPACE					DATA WERE	*		*		HNIC WIND TUN			*	
<-141,		VEHICLE	•			*ALS	D TAKEN	*		*	,	*L (UNITARY)		A SARVER	*	
		BITER CO		_		*		*		+	*	*		T.DAVIET	*	
		ON (MODE		_		*		*		*	k	*	*-D	MS	*	_
		N THE AR				*		*		*	*	*	*		*	Ç
		UNITARY				*		*		+	4	*	*		*	
		D TUNNEL				*		*		*	*	*	*		*	
		O 6 AND	0.9 (DA2	2 *		*		*		*	*	*	*		*	100
	*	2A)		*		*		*		*	×	*	*		*	•
	*			*		*		*		*		*	*		*	7
3C					SV 4 140A/B ORB					*0 030		+ARC /			/ R+DMS-DR-2131	5
7SWT		ATION OF					RIBUTIONS OF			+1 55		*ARC -		KWELL	*MAY, 1975	, ,
16		-SCALE M					TER ALONE	FO*		*2.2				CHEE / ROCK	WEL*	
422B		HE SPACE		_			DATA WERE	*		*		*OT SUPERSONI			*	
₹-141,		140A/B 0				*ALS	D TAKEN	*		*		*WIND TUNNEL			*	
		NFIGURAT	,			*		*		*	*	+NITARY)		T.DAVIET	*	
		L 47-0)				*		*		*	*	+	*-[MS	*	
		C 9- BY				*		*		*	×	*	*		*	
		ITARY PL		-		*	•	*		*	*	*	*		*	
		UNNEL FO				*		*		*	*	*	*		*	
		55 AND 2	.2 (DA22	2B*		*		*		*	*	+	*		*	
	*)		*		*		*		*	٠,	*	*	•	*	
	*			*		*		*		*	*	*	*		*	

¥

					WIND	TUNNEL TEST	' /	DMS DATA	PROCES	SSING					15
	,	 k	 *		*		*		*MODEL		·	*	COGNIZANT	* [BASIC
TEST	٠,	*	*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBI	LICATION
ID		* REPORT TIT	TLE *		+	PURPOSE	*				* AGENCY	*	PERSONNEL	*OR (COMMENTS
AEDC	- ;	RESULTS OF	*IMANYC	-089B W/MOD NOSE	*HYPE	RSONIC DYNA	MI*F	ORCE	+0 012	2 /			LMAR FREEMAN,	/LA*DMS	-DR-2132
HWTB	- :	*C STABILITY	TESTS*		*C \$1	ABILITY	*		*8 O	-	*AEDC -	*RC		*MAY,	, 197
48A	/;	CONDUCTED OF	* A V		*		*		*8 O		*HYPERSONIC			*	
LA42	,	O12 SCALE MO	DIFIE+		*		*		*		*D TUNNEL (E			*	
CR-141,	535	*D 089 B \$HU1	TTLE O*		*		*		*		*	*-D	DMS	*	
	,	*RBITER IN TH	HE AED*		*		*		*		*	*		*	
	,	*C-VKF TUNNEL	B AT*		*		*		*		*	*		*	
	,	*A MACH NUMBE	ER OF *		*		*		*		*	*		*	
	,	*8 O (LA42)	*		*		*		*		*	*		*	
	,	*	*		*		*		*		*	*		*	
LARC	- ,	*RESULTS OF 1	TESTS +	ORBITER	*08TA	IN HYPERSON	IC*F	ORCE	+0 010) /	*LARC /	*D.	E THORNTON,	/RI*DMS-	-DR-2133
CFHT	۰,	IN THE NASA	LARC *	EXTERNAL TANK	*STAE	ILITY DATA	o *		*10 3	-	+LARC -	*T.	BLACKSTOCK	/ N*JULY	Y, 197
107		31-INCH CFHT			*N 0F	BITER - EXT	ER*		*10 3		*CONTINUOUS~	FLO*AS	SA/LARC	*	
IA58	•	N 0.010-SCAL				TANK WITH A			*		*W HYPERSONI	C T+D	A SARVER	*	
		EL (32-0T) (OUT PLUME A			*		*UNNEL	*V.	W SPARKS	*	
		SPACE SHUTTL			*BEAN	-	*		+		*	*-D	MS	*	
		NFIGURATION			*		*		*		*	*		*	
		OBTAIN HYPER			*		*		*		*	*		*	
		AERODYNAMIC			*		*		*		*	*		*	
		ACTERISTICS			*		*		*		*	*		*	
		ECOND STAGE			*		*		*		*	*		*	
		TION DURING			*		*		*		*	*		*	
		AL BOOST AND			*		*		*		*	*		*	
		KABORT RTLS N			*		*		*		*	*		*	
		"MOOKI KILS "	*		•		4		*		*	*		*	
AEDC				ORBITER -140A/B C	TUVDE	DEONITO ŠTAR	T1 +E	ODCE	*O 015	. /	*ROCKWELL/	*D	L GILLINS/RO	ICK+DMS-	-DP-2134
HWTB		*IGATIONS (DA		ONETE - 140A/B C	******	AND CONTROL	4		+6 0 1		+AEDC -	*WE			ISION O1
VA474		D 0A78) ON A				ROL SURFACE			*0 -		*HYPERSONIC				. 197
VA474 H₩TC	•	15-SCALE 140				TIVENESS	*		* .				M MOSER JR	***************************************	, ,57.
OA77						IOLDS NUMBER			 		*HYPERSONIC			*	
		ONFIGURATION	_				T.		T.		*D TUNNEL (C	-	nn o	- T	
0A78		E SHUTTLE VE			*FFEC	12	T _		- 7 - 3		*D INNINET (C	·		*	
UK-134,		ORBITER MODE			本		* *		4		т ъ	•		*	
		K-O IN THE A			本		*		*		<i>т</i>	*		*	
		F B AND C WI	*טו טאו		*		*		*		本	T.		-₹ -#-	
	,	PNNELS	*		*		*		*		*	₩.		*	

		•					1	VIND 1	TUNNEL TES	T /	DMS DATA	PROC	ESS	SING								152
	+			*			:	· *		~~		*MOD	EL		*			*	_ ~ _ (COGNIZANT	* BAS	10
TEST	*			*	CONF	IGURA	TIONS	*	TEST	*	TYPE OF	*	5	SCALE	* T	ESTI	NG	*	TI	EST DMS	*PUBLIC	ATIONS
ID	*	REPORT	TITLE	*		TESTE	D ,	* 	PURPOSE	*	TEST	*MAC	HF	RANGE	* A	BENC'	Y 	*		PERSONNEL	*OR CON	MENTS
RC	- *			4 T/	ASK C	ANCEL	LED A	+TECT	CANCELLED	A == E	iones	*10		_	*NAS	۸.	,	**	R:	LACKSTOCK /NA	*!!!!!	-212E
HT	- *					1974			T 1974	*	UNGL	*	3		*LAR		_		A-L/		*TASK	. 2.00
)	/*			*	3031,	1514		*	1 131-4	*		*					0115-6	_		VAUGHN	*CANCEL	LED
13	*			*			,	k		*		*					_	-		VAUGHN	*AUGUST	
•	*			+				*		*		*			*UNN			-	DMS		*	,
	*			*				k		*		*			*			*			*	
C	- *R	ESULTS	OF HEAT	T*R	17 C7	MA F	5 W103:	*ΤΟ ΩΙ	BTAIN HEAT	RA+F	HEAT-TRAN	S*0 0	175	5 /	*ARC		/	*T	.F	FOSTER, W.H	*DMS-DR	-2136
			TESTS OF						ATA FOR TH			*5 3			*ARC		_		YE/I		*VOLUME	
8			5-SCALE						AND SECON			*5 3	3		+3.5	-F00°	T HYP	ER*W	K	LOCKMAN, H L.	*MAY,	1975
13	*P	ACE SHU	TTLE VEH	HI*B	17 C7	M4 F	5 W103	TAGE	VEHICLES	AND*		+			+SON	IC W	IND	rบN+5	EEGI	MILLER/NASA	*	
-141.5			L 22 OTS						NVESTIGATE			*			*NEL			*A	MES		*	
	1	N THE N	ASA-AMES	S +B	17 C7	M4 F	5 W103	NTER	FERENCE HE	ATI		+			*			*B	J	. FRICKEN	*	
	*3	5-F00T	HYPERSO	ON*E	22 V7	R5 T	10 S8 3	∗NG E	FFECTS	*		*			*			*-	DMS		*	
	*I	C WIND	TUNNEL	*			4	+		*		*			*			*			*	
	*(IH3)		*				*		*		*			*			*			*	
	*	•		*			3	+		*		*			*			*			*	
PC	- +R	ESULTS	OF HEAT	T*6	17 C7	M4 F	5 W103	*TO OI	BTAIN HEAT	RA+F	HEAT-TRAN	S*0 C	175	5 /	*ARC		/	*T	.F	FOSTER, W H.	*DMS-DF	₹-2136
5HWT	- *R	ANSFER	TESTS OF	* *E2	22 V7	R5	2	TE D	ATA FOR TH	E F*		*5 3	3 .	-	*ARC		-	*D	YE/	RI	*VOLUM8	02
8'	/*A	N 0.017	5-SCALE	S*T	10		;	*IRST	AND SECON	D S*		*5 3	3		*3 5	-F00	T HY	PER*W	ĸ.	LOCKMAN,H L	*MAY,	1975
13	*P	ACE SHU	TTLE VEH	11 *B	17 C7	M4 F	5 W103	*TAGE	VEHICLES	AND+		*			+SON	IC M	IND	TUN*S	EEG	MILLER/NASA	*	_
!-141,5	515*C	LE MODE	L 22 OTS	5 *E2	22 V7	R5 T	10 :	*TO II	NVESTIGATE	I *		*			*NE L			*A	MES		*	9
	* [N THE N	ASA-AMES	5 *			,	+NTER	FERENCE HE	ATI*		*			*			∗B	J	FRICKEN	*	
	+3	5-F00T	HYPERSO	*NC			•	+NG E	FFECTS	*		*			*			*-	DMS		*	7
	* I	C WIND	TUNNEL	*			:	+		*		*			*			*			*	ç
	* (IH3)		*			•	*		*		*			*			*			*	
	*			*			:	*		*		*			*			*			*	•
sc.	~ *R	ESULTS	OF HEAT	T+B	17 C7	M4 F	5 W103	*TO 01	BTAIN HEAT	RA*F	HEAT-TRAN	S*0 C	017	5 /	+ARC		/			FOSTER, W.H.		≀-2136 ¿
	- +R	ANSFER	TESTS OF	* E 2	22 V7	R5			ATA FOR TH			*5.3			*ARC		-		YE/		*VOLUME	. 03
8			5-SCALE						AND SECON			+5 3	3							LOCKMAN, H. L		03 5 1975
13	*P	ACE SHU	TTLE VEH	II*B	17 C7	M4 F	5 W103	*TAGE	VEHICLES	AND*		*					IND			MILLER/NASA	*	
≀-141,5			L 22 OT						NVESTIGATE			*			*NEL				MES		*	
									FERENCE HE	ATI*		*			*			_	_	. FRICKEN	*	
	*3	.5-FOOT	HYPERSO	ON*E	22 V7	R5 T	10 S8	*NG E	FFECTS	*		*			*			*-	DMS		*	
		C WIND	TUNNEL	*				*		*		*			*			*			*	
	* (IH3)		*				*		*		*			*		•	*			*	
	*			*				*		*		*			*			*			*	

		WIND TUNNEL	TEST / DMS DA	TA PROCESSI	NG		153
	* *	*	*	*MODEL	*	* COGNIZAN	T * BASIC
TEST	r * * CONFIGURATIO	NS * TEST	r * TYPE	OF * SC	ALE* TESTING	* TEST DMS	
ID	* REPORT TITLE * TESTED	* PURPOS	SE * TEST	*MACH RA	NGE+ AGENCY	* PERSONNE	Ł *OR COMMENTS
ARC	- *RESULTS OF HEAT T*B17 C7 M4 F5 W						W H *DMS-DR-2136
	- *RANSFER TESTS OF *E22 V7 R5	*TE DATA FOR		*5.3 -	*ARC -	*DYE/RI	*VOLUME 04
178	/*AN 0.0175-SCALE S*T10	*IRST AND ST		+5 3		TUN*SEEGMILLER/N	,H L.*MARCH, 1976
IH3	*PACE SHUTTLE VEHI*B17 C7 M4 F5 W			*	*NET	*AMES	ASA *
CR-141,	517*CLE MODEL 22 DTS *E22 V7 R5 T10	*TO INVESTIG		**	* IN E L,	*B J FRICKE	N *
	*IN THE NASA-AMES *B17 C7 M4 F5 W		: HEALL*	4	*	*-DMS	*
	*3.5-FOOT HYPERSON*E22 V7 R5 T10 *IC WIND TUNNEL *	SB *NG EFFECIS	*	*	*	*	*
	*(IH3) *	T .	*	*	*	*	*
	* (183)	*	*	*	*	*	*
LARC	- *RESULTS OF TESTS *CONFIGURATION	3 *DETERMINE	FFECTS+FDRCE	* 0.01	/ *NASA/NR /	*D E THORNTO	N /RI*DMS-DR-2137
CFHT	- *IN THE NASA/LARC *MODEL 32-0)	+OF RCS JET		*10 33-	+LARC -	*D E POUCHE	
108	/*31-INCH CFHT ON A*	*FIELD ON HY		*10 33	*CONTINUOUS-	FLO*-DMS	*REVISION 01
IAGO	* 0 01-SCALE *	*IC STABILIT		*	*W HYPERSONI	C T*	*SEPT , 1974
	.103*MODEL (32-OT) OF *	*CONTROL	*	*	*UNNEL	*	*
	THE SPACE SHUTTLE	*	*	*	*	*	*
	*CONFIGURATION 3 +	*	*	+	*	*	*
	*TO DETERMINE THE *	*	*	*	*	*	*
	RCS JET FLOWFIELD	*	*	*	*	*	*
	*INTERACTION EFFE *	*	*	*	*	*	*
	CTS ON AERODYNAMI	*	*	*	*	*	*
	C CHARACTERISTICS	*	*	*	*	*	*
	(IA60/QA105) VOLU	*	*	*	*	*	*
	*ME 1 OF 2 +	*	*	*	ж	π 	* -
	*	*	*	*	/ #818 CA /ND /	***************************************	N /RI*DMS-DR-2137
LARC	- *RESULTS OF TESTS *CONFIGURATION3			+ 0 01 *10 33-	/ *NASA/NR / *LARC -	*D. E. POUCHE	
CFHT	- *IN THE NASA/LARC *ODEL 32-0	+OF RCS JET		*10 33- *10 33	*CONTINUOUS-		*JULY. 1974
109	/*31-INCH CFHT ON A*	*FIELD ON H		* 10 33	*W HYPERSONI		*
DA 105	* O 01-SCALE *	*IC STABILIT	IY AND *	,	*UNNEL	*	*
CR-134,	, 106*MODEL (32-OT) OF *	*COM LKOL		*	*	*	*
	THE SPACE SHUTTLE *CONFIGURATION 3 *	*	*	*	*	*	*
	*TO DETERMINE THE *	*	• *	*	*	*	*
	RCS JET FLOWFIELD	*	*	*	+	*	*
	*INTERACTION EFFE *	*	*	*	*	*	*
	CTS ON AERODYNAMI	*	*	*	*	*	*
	C CHARACTERISTICS	*	*	*	*	*	*
	*(IA60/0A105) +	*	*	*	*	*	*
	* *	*	*	*	*	*	*

					WIND	TUNNEL TE	ST /	DMS DATA	PROCESS	SING					154
TES	т *		*	NF I GURATIONS	*	TECT	*	TUDE OF	*MODEL		*	*	COGNIZANT	* BAS	
ID		REPORT TITLE	*	TESTED	*	TEST PURPOSE	*	TYPE OF TEST		CALE		*	TEST DMS	*PUBLIC	
								1651	*MACH R	CANGE	* AGENCY	* 	PERSONNEL	*OR COM	MENTS
LARC	- */	EROHEATING(PRES	5*0 010	O-SCALE VERS	I*TO O	BTAIN PRE	SSUR*P	RESSURE	*0.010	/	+LARC /	*B	SPENCER, JR	/LA*DMS-DR	-2138
UPWT	- *(RE) CHARACTERIS	T*ON O	THE VEHICL	E∗E ME	ASUREMENT	S ON*		*2 36 -	-	*LARC -	*RC	, R B. KINGS	LAN*VOLUME	01
1059	/*]	CS DF A O 010-S	C*3 SP/	ACE SHUTTLE					*4.6		*UNITARY PLAN	W*D/	RI	*MAY,	1976
IH4	*/	LE VERSION OF T	1*CONF	GURATION	*GURA	TION, ORBI	TER *		*		+IND TUNNEL	*R	H. LINDAHL	*	
CR-144		VEHICLE 3 SPAC			+ALON	IE,EXTERNA	L TA*		*		*	*-D	MS	*	
		HUTTLE CONFIGUR				LONE, AND			+		*	*		*	
		TION(26-OTS) IN			+D R0	CKET BOOS	TER *		*		+	*		*	
		HE LANGLEY RESE				IE; ALSO T			*		*	*		*	
		CH CENTER 4-FOD			*TAIN	I HEAT TRA	NSFE*		*		*	*		*	
	*1	IND TUNNEL(IH4)	*		+R DA	TA	*		*		*	*		*	
	*		*		*		*		*		*	*		*	
LARC	- */	EROHEATING(PRES	5*0 O10)-SCALE VERS	I * TO 0	BTAIN PRE	SSUR*P	RESSURE	*0 010	/	*LARC /	*8.	SPENCER, JR.	/LA*DMS-DR	-2138
UPWT	- *	RE) CHARACTERIS	T*ON OF	THE VEHICL	E*E ME	ASUREMENT	S ON*		*2 36 -	•	*LARC -		, R.B KINGS		
1059	/*1	CS OF A 0.010-S	C*3 SP/	CE SHUTTLE	*THE	LAUNCH CO	NFI *		*4 6		*UNITARY PLAN			*JULY.	1976
IH4	* 6	LE VERSION OF T	4*CONF	GURATION	*GURA	TION, ORBI	TER *		*		*IND TUNNEL	*R		*	
CR-144	.609*E	VEHICLE 3 SPAC	<u>:</u> *		*ALON	E, EXTERNA	L TA*		*		*	*-D		*	
		HUTTLE CONFIGUR			*NK A	LONE, AND	SOLI*		*		+	*		*	
		TION(26-OTS) IN			*D RO	CKET BOOS	TER *		*		*	*		*	
	*1	HE LANGLEY RESE	\ *		*ALON	E. ALSO T	0 OB*		*		*	*		*	
	* 5	CH CENTER 4-FOO	T 4		*TAIN	HEAT TRA	NSFE*		*		*	*		*	
	* 1	IND TUNNEL(IH4)	*		*R DA	TA	*		+		*	*		*	
	*		*		*		*		*		*	*		*	
LARC	- + /	EROHEATING(PRES	\$+0 010	-SCALE VERS	I * TO O	BTAIN PRE	SSUR*P	RESSURE	+0 010	1	*LARC /	*B	SPENCER.JR	/LA*DMS-DR	-2138
UPWT	- *L	RE) CHARACTERIS	T*ON OF	THE VEHICL	E*E ME	ASUREMENT	S ON*		*2 36 -		*LARC -		, R B KINGS		
1059	/*I	CS OF A O 010-S	*3 SPA	CE SHUTTLE	*THE	LAUNCH CO	NFI *		*4 6		*UNITARY PLAN			*JULY,	1976
IH4	*.∆	LE VERSION OF TO	1+CONF I	GURATION		TION, ORBI			*		*IND TUNNEL		H LINDAHL	*	1570
CR-144	610*E	VEHICLE 3 SPACE	*			E EXTERNA			*		**************************************	*-D		T.	
		HUTTLE CONFIGUR				LONE . AND			*	,	*	*	110	*	_
		TION(26-OTS) IN				CKET BOOS			*	,	· *	*		*	Ç
		HE LANGLEY RESEA				E: ALSO T			*	,	*	*		*	
		CH CENTER 4-FOO				HEAT TRA			*	:	· *	*		*	7
		IND TUNNEL(IH4)			*R DA		*		*	,	*	*		*	FOOR

ORIGINAL PAGE IS OF POOR QUALITY

							MIND	TUNNEL T	EST /	DMS DATA	PROCES	SSING						155
							*		*		*MODE!		*		*	COGNIZANT	* BASIC	
TEST	*			*	CONFT	GURATIONS	+	TEST	*	TYPE OF			* TESTIN	√G	* *	TEST DMS	*PUBLICAT	IONS
ID	*	REPORT	TITLE	*		ESTED	*	PURPOSE	*				* AGENCY		*	PERSONNEL	*OR COMME	NTS
	-						-											
C ·	4.8	EDONEAT	TNO(DÖE	56 + U	010-5	CALE VERS	T * TO 1	18TAIN DE	FSSIID*F	PRESSIDE	*0 010	2 /	*LARC	/	*B :	SPENCER.JR /	LA*DMS-DR-2	138
						HE VEHICL				MEGGGME	*2 36	- ,	*LARC	_	*RC.	R.B KINGSL	AN*VOLUME O	4
9						SHUTTLE					*4.6		*UNITARY	PLAN V				1976
			ION OF					ATION, ORB			*		*IND TUNN	VEL	*R	- LINDAHL	*	
			E 3 SPA		0141 100			NE EXTERN			*		*		*-DM:		*	
144,0			CONFIGU					ALONE, AND			*		*		*	-	*	
			S-DTS) I					DCKET BOD			*		*		*		*	
		•	SLEY RES				-	NE: ALSO	-		*		*		*		*	
			ER 4-FO					NE; ALSO N HEAT TR			*		*		*		*	
			INEL(IH4				*R D		MINDI L.		*		*		+		*	
	**	THO TON	11/EL(114	, <u> </u>			*	41A			*		*		*		*	
.AD		CECAT A	TE ELEVA	不 1.1 上1.4	1 70 <u>-0</u> 0	0140A/B,		ADITCH EE	EECT +	EUDCE	* 0 04	105 /	*RT	1	*TFR	RANCE HUGHES	/*DMS-DR-2	139
								NEW ELEVO		OKOL	*0 20		+NRLAD	<u>_</u>	*RI			1974
			IGURATI		DEL 43	-0		FIG ON L			+0.26			ED WINI		E POUCHER	*	
	•		LONGIT	_				INAL AND			*		*TUNNEL		*-DM		*	
18			LATERA	•				ECT STABI			•		*		*		*	
134,4	-		NAL STA										*		*		*	
			CONTRO					CONTROL ENESS. MO			т 4		•		*		*	
			ENESS O						UEL 4*		T.		•		*		*	
			SPACE	*			*3-0		**						·		*	
			ORBITER	*			*		*		-#- 		r		т ъ		•	
	* (1460/04	(105)	*			*		*		*		¥		т "		±	
	*			*			*		*		*		7	. ,	*	RANCE HUGHES	/D#DMC_DD_0	140
.AD	- *I	NVESTI	O MOITAG	F *1	40 A/B	SPACE SH				FORCE	* 0 0		*ROCKWELL			WELL INTERNA		
			UTTLE 0		TLE OR	BITER		ITUDINAL			*0 26		+NRLAD				*	1314
)	/*I	TER SUE	SONIC S	TA*				RAL-DIREC			*0.26		*LOW SPEE	FD ATM				
17		ILITY #		*				TABILITY			*		*TUNNEL			ZEMAN/ROCK		
134,4			CHARACT					TROL CHAR			*		*			INTERNATIONA	L *	
	* I	STICS A	AND DETE	RM*				ICS FOR T			*		*		_	A SARVER	*	
	* I	NATION	OF CONT	RO*				CONFIGUR			*		*			G MCDONALD	*	
	+L	SURFAC	E HINGE	*			-	S CONTROL			*		*		*-DM	5	*	
	M	OMENTS	IN THE	RO				FACE HING	E MOM*		*		*		*		*	<u>.</u>
	*C	KWELL I	NTERNAT	*OI			*ENT	S	*		*		*		*		*	
			SPEED W				*		+		*		*		*		*	4
	*D	TUNNEL	. (DA37)	*			*		*		*		*		*		*	-
	*			*			*		*		+		*		*		*	
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							WIND	TUNNEL	TEST /	/ D	MS DATA	PROCES	SSING	i							156
		*			~ *		* -			*		*MODE!	 !.	*			 k	. – – – k	COGNIZANT	* BASI	 IC
TEST	Τ	*			* CI	ONFIGURATION	v s *	TEST	Ī	*	TYPE OF			E*	TEST	ING	k		EST DMS	*PUBLICA	
ID		*	REPORT		*	TESTED	*	PURPOS									*		PERSONNEL	*OR COM	
EDC						EL NO 29-0/										1			UAN/RI	*DMS-DR	-2141
WTB				KWELL INT		000139	*NUME	ER EFFE	ECTS A	*		*10 5	-	* £	EDC	-	*	A B	OUDREAUX/ARO	*JUNE,	1975
A354				AL SPACE			*ND 7	O OBTAI	IN OVEI	₹*		*14		* -	YPERS	ONIC	WIN	∗W B	. MEINDERS	*	
H11				ORBITER (*ALL	HEATING	RATE	+		*		*E	TUNN	EL (I	B) +	-DMS		*	
R-141	, 53			FIGURATIO			*DAT/	AT MAG	CH NUME	3*		*		*			k	*		*	
		*N	0.0175	5-SCALE M	+		*ERS	FROM 10) 5 TO	*		*		*			4	k		*	
		*01	DEL (NO	29-0) IN	+		* 16			*		*		*			k	k		*	
		*	HE AEDC	TUNNEL	*		*			*		*		*			*	۲		*	
		*F	TO DETE	ERMINE HY	*		*			*		*		*			*	k		*	
		*PI	ERSONIC	HEATING	*		*			*		*		*			*	k		*	
		*E	FECTS ((OH11)	*		*		•	*		*		*			×	k		*	
		*			*		*			*		*		*			,	k		*	
ISFC	-	*DI	TERMINA	ATION OF	+TIT	AN III C SRM	vf +STAT	TIC STAF	BILITY	*F0	RCE	*.007	36 /	*1	IASA	/	,	PAUL	RAMSEY/ NAS	A*DMS~DR	-2142
4TWT	-	*A	ERODYNAN	AIC STABI	*		*AND	DRAG ON	ATIT V	٧*		#0 6			ISFC	-		MSFC		*AUGUST	
87		/*L	TY AND	DRAG OF	*			AT HIGH				*4 96				H TR	I SON:	V. W	SPARKS	*	• • •
A4	•		E TITAN		*			F ATTAC	,	*		*			C WIN					*	
R-134	. 40:		JRING EN		*		*			*		*		*			, ,, ,,	k		*	
	,	*		• • • • • • • • • • • • • • • • • • • •	*		*			*		*		*			,	k		*	
EDC	_	*A1	ERODYNAN	ATC RESUL	* INT	EGRATED VEHI	rel *PROX	TMITY F	FEECTS	:*FП	PCF	+0.01	/	* * £	EDC	1	,	kil DA	ILEDA/ RI	*DMS-DR	-2143
WTA						CONFIGURATIO					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+4 5			EDC	<u>'</u> _			VAUGHN	*FEB	
A422				AN 0 01				ROCKET				*4 5				ONTO			. VAUGHN	*	1010
A61A	•			ODEL (32		11100	+NG	· KOOKE	5 1 110			*			TUNN					atr.	
	50			CE SHUTT			*							*	1 0 11 1	'	Π,	. D.,,,		*	
	,			RATED VEH			•			<u>.</u>		T		·						•	
				HE AEDC			. T			1		Ţ		Ţ.							
				ICH SUPER			.			T		*		<u>.</u>				r L		*	
				ID TUNNEL			*					*		<i>τ</i>						т т	
		* 30	MIC WIL	AD LOIMAEL	·r		4			Ĩ.				1						4	
IRLAD	_		LYNVECT	TOATTON .	σ al AlU	NCH CONFIGUE	* ************************************	OWTHE T		T Name	eccupe.	*0 00		·	2. I	1		, m . i	ROGGE / ROC	WADMEDD.	0111
TWT												*0 00				•					1974
281				JPPORT IN				ND SUPE			IRGE		-		IRLAD				INTERNATION	IA*NUV.,	19/4
	,			E EFFECT				ACTERIS				*2 0			-FOOT				CARVER	**	
A68	40		OF THE		*		*0F 1					*			MIND	IUN			SARVER	# .u.	
K-134	, 42			-OTS IN				ORT IN		: *		*		*					. SPARKS	**	
				ONIC AND			*NCE	EFFECTS	5	*		*		*			,	*-DMS		*	
				C FLOW	*		*			*		*		*			,	۲		*	
			GIMES	:	*		*			*		*		*			,	k		*	
		*			*		*			*		*		4			,	ŧ		*	

	WIND TUNNEL TE	ST / DMS DATA	PROCESSING		157
+ .	* IGURATIONS * TEST TESTED * PURPOSE	* TYPE OF		* TEST DMS *F	BASIC PUBLICATIONS OR COMMENTS
	TESTED * PURPOSE AL TANK WIT*OBTAIN FORCE UBERANCES *MOMENT STATIC AL TANK WIT*BILITY DATA F ROTUBERANCE*HE EXTERNAL T *AT RE-ENTRY C *TIONS * * * *TO ISOLATE TF *FECTS OF INTE *ING AERODYNAM *GENERATED BY *ORBITER, TANK *D SRB ON THE *FLUTTER BOUND * * * * * * * * * * * * *	AND *FORCE C STA+ FOR T* FANK + CUNDI+ * * * * * * * * * * * * * * * * * * *	+ +1C WIND TUNNE * * * * * * * * * O.0125 / *LARC / *O 6 - *LARC - *1 45 *26-INCH TRANS	*M K ROBERTSON / *I *NORTHROP SERVICES*C *INC *N*P E RAMSEY / NAS* L*A-MSFC *V W. SPARKS **U W SPARKS **-DMS * ** *M A. KOTCH /RI - *I *R W HESS /LARC */ ID*D A SARVER ** **-DMS * **-DMS * ** ** ** ** ** ** ** ** ** ** ** **	DMS-DR-2145 DCT , 1974 DMS-DR-2146 APRIL, 1974
* *	*	*	•	· · · · · · · · · · · · · · · · · · ·	ALINY SEE SEE

## SONIC WIND TUNYS ## SONIC WIND ## SONIC	*							158
TEST * CONFIGURATIONS * TEST TYPE OF SCALE * TESTING * TEST DMS * PURDICATION DID * REPORT TITLE * TESTED * PURPOSE * TEST * MACH ARANGE* AGENCY * PERSONNED * POR COMMENT. C		*	*	*	*MODEL	*	* CDGNIZANT	* RASIC
TESTED PURPOSE TEST MACH RANGE AGENCY PERSONNEL +OR COMMENTS	TEST *	★ CONFIGURATION	IS * TEST	* TYPE C		LE* TESTING		
**************************************	ID * REPORT TITLE							
SHWT								
### SHAT - *ATING TEST OF SPA* 5	- *HYPERSONIC AEF	OHE*22-DTS	*TEMPEDATURE	MEASU*HEAT-TDA	NS+0 0175	/ +ADC /	*D D MINOCLAN	D D+DMC DD 0440
5								
## CONFIGURATION 3* **134.440* (MOBEL 22-0TS) 1 * * * * * * * * * * * * * * * * * *			*				TUCKWELL	*VULUME OT
-134.440=(MODEL 22-0TS) 1			*	<u>.</u>	. •	**************************************	PER*W K LUUKMAN,	AME*JUNE, 1975
**************************************			*	· ·	π 			*
* 5-FOOT HYPERSONIC* **C WIND TUNNEL(IH-* *20) C - *HYPERSONIC AEROHE*22-OTS			*	*	*	*NEL		*
C WIND TUNNEL(IH- *20) C - *HYPERSONIC AEROHE*22-OTS		- -	*	*	*	*	*-DMS	*
*20)			*	*	*	*	*	*
C - *HYPERSONIC AEROHE *22-OTS		1M=*	*	*	*	*	*	*
### SHINT - *ATING TEST OF SPA*	*20)	*	*	*	*	*	*	*
### - *ATING TEST OF SPA*	*	*	*	*	*	*	*	*
5	*****		*TEMPERATURE	MEASU*HEAT-TRA	NS*0 0175 ,	/ *ARC /	*R B. KINGSLAN	D.R*DMS-DR-2148
5			*REMENTS	*	*53 -	*ARC -	*OCKWELL	*VOLUME 02
## CUNFIGURATION 3*	,	ICL*	*	*	*7 3	*3 5-FOOT HY		AME*JUNE. 1975
NEL *B J. FRICKEN ** **NEL ***B J. FRICKEN ** **NEL ***B J. FRICKEN ** **DMS **			*	*	*			*
N THE NASA-AMES 3	134,441*(MODEL 22-OTS)	I *	*	*	*		•	*
* 5-FOOT HYPERSONI*			*	*	*	*		4
*C WIND TUNNEL(ÎH * * * * * * * * * * * * * * * * * * *	* 5-FOOT HYPERS	DNI*	*	•	•	<u></u>	* - DN3	*
*20)			*		- T	.	* *	*
* * * * * * * * * * * * * * * * * * *		*	•		4	T	* .	* .
RC - *RESULTS OF INVEST*CONFIG. 4 (-140A/*HYPERSONIC STABIL*FORCE	- + <i>r</i>	 •		4.	T.	¥	*	*
HT - *IGATIONS ON A O O*B) MODEL 72-0 *ITY AND CONTROL *		ESTACONETO A (AAO	* /**!VPPBGGNTA A	* TABL : EDDOE	*	*	*	*
## CONTINUOUS - FLO*P. T BERNOT /NASA* CONTINUOUS - FLO*P. T BERNOT /NASA* CONTINUOUS - FLO*P. T BERNOT	T - +TCATIONS ON A	COUNTIG. 4 ("140						•
## ## ## ## ## ## ## ## ## ## ## ## ##		O 048) MODEL 72-0	*IIA WAD COM!	RUL *	*10.3 -			
-141,805*E SHUTTLE VEHICLE* ** ** ** ** ** ** ** ** ** ** ** ** *			*	*	*			ASA*
*ORBITER MODEL 72 *			*	*	*	*W HYPERSONI	C T*-LARC	*
-O IN THE NASA/LA *NGLEY RESEARCH CE* *NTER CONTINUOUS F* *LOW HYPERSONIC TU+ *NNEL (DA9O) * ** ** ** ** ** ** ** ** **			*	*	*	*UNNEL	*J E. VAUGHN	*
NGLEY RESEARCH CE *NTER CONTINUOUS F* *LOW HYPERSONIC TU* *NNEL (DA90) * ** *NNEL (DA90) * ** ** ** ** ** ** ** ** **			*	*	*	*	*J. E. VAUGHN	*
NTER CONTINUOUS F *LOW HYPERSONIC TU+ * * * * * * * * * * * * * * * * * * *			*	*	*	*	*-DMS	*
*LOW HYPERSONIC TU+	*NGLEY RESEARCH	CE*	*	* •	*	*	*	*
*NNEL (DA90) *	*NTER CONTINUOU	S F*	*	*	*	*	*	* * * * * * * * *
* * * * * * * * * * * * * * * * * * *	*LOW HYPERSONIC	TU+	*	*	*	*	*	a contract of the contract of
* * * * * * * * * * * * * * * * * * *	*NNEL (DA90)	*	*	*	+	*	*	*
#T - *OF HIGH MACH NUMB*	*	*	*	*	*	*	*	•
## ## ## ## ## ## ## ## ## ## ## ## ##	C - +AN INVESTIGATE	ON ⊁SRB	*ORTAIN HIGH	MACH *FDDCE	*0.02442	/ +MSEC /	wit JOHNSON / N	" A C A +DMC_DD_4 4 E ↑
### ##################################								
25F +TY CHARACTERISTIC+								*MARUM, 19/5
-141,511*S FOR A LARGE SCA* *	. ,							/N5*
LE SOLID ROCKET B			*LARGE SCALE	2KR *	*			*
*DOSTER * * * * * * *-DMS *			*	*	*	*IND TUNNEL		*
		I R*	* ,	*	*	*	*D B WATSON	*
	*DOSTER	*	*	*	*	*	*-DMS	*

					WIN	TUNNEL TEST	/ (DMS DATA	PROCES	SSING				• - 	15
		*		**	*		+		*MODEL	 L	*	*	COGNIZANT	* 5	SASIC
TEST		*	,	* CONFIGURA	_	TEST		TYPE_OF			* TESTING	-	EST DMS		ICATION:
ID		* REPORT	TITLE '	t TESTE	D *	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*UR C	COMMENTS
															55 6454
ARC						OBTAIN HEAT		EAT-TRANS			*ARC /		DYE/RI LOCKMAN/A		DR-2151
3 5HWT			· · · · · · · · · · · · · · · · · · ·			SFER DATA UND			*73 *		*3.5-FOOT HYP			*	, , , , , ,
183	•	*ER TESTS				MULATED ENTRY NDITIONS	•		*		*SONIC WIND T			*	
DH6	0 1 1	*O175-SCAL FOR THE RO			*60	ADT 1 TON 2	*		*		*NEL	*~DMS		*	
SK-141,	011	*NTERNATIO			*		*		*		*	*		*	
		*E SHUTTLE			*		*		*		*	*		*	
		*139 (MODE			*		*		*		*	*		*	
		*R 22-0) I			*		*		*		*	*		*	
		+SA/AMES 3			*		*		*		*	*		*	
		*HYPERSONI			*		*		*		*	*		*	
		*UNNEL (TE			*		*		*		*	*		*	
		*		*	*		*		*		*	*		*	
AEDC	-	*RESULTS O	F AN INV	VEHICLE 4 O	RBITER*HYI	PERSONIC STAB	IL*F	DRCE	* 0.		+AEDC -		LLEN/ ROCK		
HVTF	-	*ESTIGATIO	N OF HY	*(MODEL 51-0) *I T	Y AND CONTROL	*		*16		*HYPERVELOCIT		UNTSVILLE (
VA489	,	/*PERSONIC	VISCOUS '	*	*		*		*20		*WIND TUNNEL			₩JAN	, 197
DA81		*INTERACTI	ON EFFEC	*	*		*		+		+)	-	. VAUGHN	*	
CR-134,	423	3*TS ON AN (0.01 SCA	•	*		*		*		*	-	VAUGHN	*	
		*LE SPACE			*		*		*		*	*-DMS		*	
		*ORBITER S			*		*		*		*	*		*	
		*L IN THE			*		*		*		*	*		*	
		*HYPERVELO		*	*		*		*		本 山			•	
		*ND TUNNEL		*	*		*		**		7- u-	<u>.</u>		*	
100		*		k Labbited Alb	* N# ###	OBTAIN HEAT	* TD#LII		ያ የቁ ለ ለ ነ	175 /	*D T /	*D B	KINGSLAND	/ *DMS-	DR-2153
LARC				*ORBITER ALO		SFER RATE DAT		CAI - INAN	*2 36		+LARC -		WELL INTERN		
JPWT 107 1		* THE HEAT / * EFFECTS DI		TANK ALONE		THE ORBITER.			*3 7		*UNITARY PLAN			*	,
IH1	•	*2-0TS 0 0		* 3KG WCGWC		ERNAL TANK,	*		*		*IND TUNNEL		SPARKS	*	
	37	7+SCALE THI				SOLID ROCKE	т *		*		*		MOSER JR	*	
JK 151,	٠.	*HERMOCOUP				STERS	*		*		*	*-DMS		*	
		*(VEHICLE			+		*		*		+	*		*	0 0
		+GURATION)		*	*		*		*		*	*		*	9
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							WIND	TUNNEL TEST	r / t	DMS DATA	PROCES	SSING						160
		*			*		*		*		*MODE!		*	*	CDGNI	 74NtT	* BASIC	. <i>–</i> – – .
TEST	Γ	*			* CON	FIGURATIONS	*	TEST	+	TYPE OF			+ TESTING	*	TEST D		*PUBLICAT	
ID		* RE	PORT TIT	LE	*	TESTED	*	PURPOSE	*	TEST			* AGENCY	*	PERSO	-	*OR COMME	
														·	PERSO		OR COMME	.IN 1 3
AEDC	_	*HEAT	TRANSFE	RTES	+MODEL	29-0	*TO	DETERMINE EF	FF*F(DRCE	*8	_	*AEDC /	**	A OLIANI A	ND J U	√.*DMS-DR-2	15/
HWTB			F A O 01			_		OF WALL TEMP			*8		*AEDC -		OUST/RI	ND 0. 1		197
/A352			SPACE SH					RE ON THE PO			*		*HYPERSONIC			TIMDALO		1975
DH4A			TER MODE					F BOUNDARY L			*		*D TUNNEL (IINDAL	5/ T	
R-134.			TO DETE					TRANSITION	-MIT		- -		AD FOMMET (RO B. W MYE	ne	*	
			EFFECT O				*	TRANSTITON					<u>т</u>	_	DMS	KS	*	
			E TEMPER						τ 		<u>.</u>		T.	*-	DIM 2		*	
			OUNDARY				•				-T-		ጥ 	*			*	
			ANSITION				٠		*		т.		* 	*			*	
			8 O IN T						*		*		*	*			*	
			KF TUNNE				•		*		*		*	*			*	
			OH4A)	L D (-T				*		*		*	*			*	
		* [,]	Ulium)		- ↑		*		*		*		*	*			*	
IRLAD		,	TETTY ASI	D COM	* *DC404	4 ° 4 0 M ° 4 M 4 0 4 °	*	1D1 7011 0107	*		*		*	*			*	
-SWT	_	TOPE	CUADACT	D CON	*B01C1	1F 12M5 1W124E				JRCE	*0 040		*NRLAD /				A*DMS-DR-2	
721			CHARACTI					ITUDINAL AND	_		*0 12		≁NRLAD -			ROGGE	/*SEPT .	1974
DA 1 10			FOR THE					RAL-DIRECTIC			*0 20		*LOW SPEED				*	
· · · · · ·							_	TABILITY AND			+		+TUNNEL) E POU	CHER	*	
JR-134,			IGURATIO					TROL FOR THE	: I*		*		*	*-	-DMS		*	
			E SHUTTLI				*ML (ORBITER	*		*		*	*			*	
		* 1 I E K	(OA110)		+		*		*		*		*	*			*	
EDO		*			*		*		*		*		*	*			*	
AEDC	-	*KESU	LIS OF A	N EXT	*ORBIT	ER WITH ET S				DRCE	* 0 01	۱ /	*ROCKWELL/	*!	R.H SPAN	GLER/ I	RO*DMS-DR-2	156
WTB			L TANK SI				*0F	EXTERNAL TAN	₩ *		*5.93	-	*AEDC -	*(KWELL		*VOLUME O) 1
/A422	/	*1101	TEST IN	THE	*ISOLA	TED ORBITER	*SEP	ARATING FROM	*		*7.98		*HYPERSONIC	WIN*t	J J. DAIL	EDA / I	RO*AUGUST,	1975
A 17A			/VKF TUN			TED ET	*ORB	ITER	*		*		*D TUNNEL (B) +0	KWELL		*	
:R-141,	797	*ON A	N O 010 :	SCALE	*		*		*		*		+	*(J E. VAU	GHN	*	
		*REPL	ICA OF T	HE S	*		*		*		*		+	*(.T.DAVIE	Т	*	
		*PACE	SHUTTLE	VEHI	*		*		*		*		*	*-	DMS		*	
		*CLE	(MODEL 5:	2-0T)	*		*		*		*		+	*			*	
		*IA17	A		+		*		*		*		*	*			*	
		*			*		*		*		*		*	*			*	
/EDC	-	*RESU	LTS OF A	N EXT	*ORBIT	ER WITH ET S	+DETI	ERMINE EFFEC	TS*FC	DRCE	* 0 01	/	+ROCKWELL/	+ 5	H SPAN	GLER/ F	RO*DMS-DR-2	156
WTB			L TANK SI					EXTERNAL TAN			*5.93	- '	*AEDC -		KWELL		*VOLUME O	
/A422	/	*TING	TEST IN	THE	*ISOLA	TED ORBITER	*SEP	ARATING FROM	*		*7 98		*HYPERSONIC			EDA / F	RO*AUGUST.	1975
A 17A		*AEDC	/VKF TUN	NEL B	*ISOLA	TED ET	*ORB		*		*		+D TUNNEL (, ,	*	
R-141,	798	*ON A	N O 010	SCALE	*		*	• •	*		*		*	,	J E. VAU	GHN	*	
,			ICA OF T				*		*		*		*	-	J T.DAVIE		*	
			SHUTTLE	_			*		*		*		*		DMS	•	*	
			(MODEL 5				*		*		*			φ- •	Dina		•	
				,										~			т	
		*IA17	Д		*													

						WIND	TUNNEL TEST	/	DMS DATA	PROCE	SSING							161
										*MODE!		*	*		COGNIZANT	*	BASIC	
	*			*	CONFICURATIONS	**	TECT	* *	TYPE OF			* TESTING			EST DMS		PUBLICAT	
TEST		DEDODE			CONFIGURATIONS	*	TEST PURPOSE		TEST			+ AGENCY			PERSONNEL		OR COMME	
10		REPORT	1116	* 	TESTED	· · · · · · · ·	PURPUSE		1634	*MACH								~
AEDC	- *	RESULTS (IF AN FX	T+Ω	RBITER WITH ET S	*DETE	RMINE EFFECT	rs*F	FORCE	* 0 0	1 /	*ROCKWELL/	*R	н.	SPANGLER/	R0*	DMS-DR-2	156
HWTB							XTERNAL TANK			+5 93		+AEDC -		KWE			ADLAME O	
VA422					SOLATED ORBITER	*SEP	RATING FROM	*		*7 98		*HYPERSONIC	MIN*1	U	DAILEDA /	R0*	AUGUST,	1975
IA17A					SOLATED ET	*ORB1		*		*		*D TUNNEL (B) *0	KWE	ĹĹ	*		
		ON AN O				*		*		*		+	-	_	VAUGHN	*		
		REPLICA C				*		*		*		*	-		DAVIET	*		
	*	PACE SHUT	TLE VEH	I *		*		*		*		*	*-	DMS		*		
	*	CLE (MODE	EL 52-01)*		*		*		*		*	*			*		
	*	IA17A		*		*		*		*		*	*			*		
	*			*		*		*		*		*	*			*		_
LARC	~ +	HEAT TRAN	SFER TE	S*0	RBITER WITH EXT	*ORB	TER/EXTERNAL	_ * 	HEAT-TRANS	*19.8		*NASA /			WALSTAD/R			
HNT					NAL TANK	*TANE	CASCENT HEAT	Γ Ι Ψ		*19.8		+LARG -	_		SARVER	*	DEC ,	1975
28	/*	ALE THIN	SKIN SP	A *O	RBITER	*NG		*		*		*HYPERSONIC				*		
IH19	*	CE SHUTTI	LE MODEL	*E	XTERNAL TANK	*		*		*		*ROGEN TUNNE	L *-	DMS		*		
CR-141,	822*	(50-0, 4	41-T) I	N*		*		*		*		*	*			*		
	*	THE LANGE	LEY RESE	*		*		*		*		*	*			*		
	*	ARCH CENT	TER NITR	0*		*		*		*		*	*			*		
	*	GEN TUNNS	EL AT MA	C*		*		*		*		*	*			*		
	*	H 19		*		*		*		*		*	*			*		
	+			*		*		*		*		*	*_			*		
MSFC	- *	FLOW VISU	JALIZATI	0*0	13, T9, S7		BTAIN FLOW \		STRUCT-DYN			*ROCKWELL/		-	HAWTHORN			
14TWT	- *	N TESTS (3F A O O	*			IZATION PHOT			*3 48		+MSFC -	*1			*	OCT ,	1976
582	/*	4-SCALE S	SPACE SH	U*) HELP INTERF			*		*14-INCH TRI				*		
IS6A		TTLE VEH:					(S1 AERO-NOIS	SE*		*		+IC WIND TUN				*		
CR-147,	640*	ODEL (NO	13-0TS) *		*DAT	1	*		*		*			MOSER UR	*		
		IN THE MS				*		*		*		*	*-	DMS		*		
		NCH TRISC	DNIC MIN	D*		*		*		*		*	*			*		
	*	TUNNEL		*		*		*		*		*	*			*		
	*			*		*		4		*		*	*			*		

		. 			WIND	TUNNEL TES	т /	DMS DATA	PROCE	SSING					162
		*	*		*		*		+MODE!	L ,	*	*	COGNIZANT	* BAS	IC
TEST		*	*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLIC	ATIONS
ΙD		* REPORT TI	ITLE *	TESTED	*	PURPOSE	*	TEST		_	* AGENCY	*	PERSONNEL	*OR COM	
RC	_	*AFDODVNAMIC	י מבפווי 🕨	140 A/B SSV ORBIT	runete	DMINE EEEC	СТСТЕ	ODCE	+ ^ ^	45 / 3	*ROCKWELL/	4.15	HN H. CAMPBE	11 *nMc-no	-24EQ
6SWT		*TS OF SUPPO				TING BASE	-	OKCE	*0.6		*ARC -		.AND WILLARD	•	
09		*TEM EFFECTS		- N		NG WITH AN	–		*2.0		*6-F00T BY 6-F		•	*OCT	
A59		*CONDUCTED 1				OUT MPS NOZ			*2 0		*OT SUPERSONIC			*001 .	1317
		*NASA/ARC 6-			*S	101 MF3 NOZ	2LE *		*		*WIND TUNNEL		G. MCDONALD		
X 104,4		*OT SUPERSON			T 3		- T				* ATMD TOMMET	*-0			
		*D TUNNEL US			-T						4 .t.	- ↑ - L	mo	*	
		*0 015-SCALE			**		- T		*		₹	- -		- *	
			_		*		*		*	,	*	*		*	
		*MODEL OF TH			*		*		*	,	*	*		*	
		*IGURATION 1			*		*		Ψ.	,	∀	*		*	
		SSV ORBITER	₹ (UA59		*		*		*	;	*	*		*	
		+)	*		*		*		*	,	*	*		*	
		*	*		*		*		*		*	*		*	
RC				140 A/B SSV ORBIT				DRCE	* 0.0		*ROCKWELL/		HN H CAMPBE		
6SWT		*TS OF SUPPO		:R		TING BASE			*0 G		*ARC -		, AND WILLAR		
09		*TEM EFFECTS				NG WITH AN			*2 0		*6-F00T BY 6-F		•	*OCT ,	1974
A59		*CONDUCTED I			*ITHO	IUT MPS NOZ	ZLE*		*		*OT SUPERSONIC			*	
R-134,4	412	?*NASA/ARC 6-	-BY-6 F+		*S		*		*	:	*WIND TUNNEL	*G.	. G MCDONALD	*	
		OOT SUPERSO	ONIC WI		*		*		*	:	*	*-0	MS	*	
		ND TUNNEL U	JSING A		*		*		*		*	*		*	
		*0 015 -SCAL	_E *		*		*	•	*		*	*		*	
		MODEL OF TH	IE CONF		*		*		*		*	*		*	
		*IGURATION 1	140A/B *		*		*		*		*	*		*	
		SSV ORBITER	? (OA59		*		*		*		*	*		*	
		*)	*		*		*		*		*	*		*	
		*	*		*		*		*		*	*		*	
RC	_	*WIND TUNNEL	TESTS*5	52-OT	*70 F	VALUATE BA	SIC*E	ORCE	*0.01	n /	*ARC /	*V	ESPARZA, E.	CH*DMS-DR	-2160
5HWT		*OF THE O Of		•		RSONIC STA		ONGL	*5 3	- •	*ARC -		ROCKWELL IN		
91		*LE SPACE SH				CHAR OF			*10.3		*3.5-FOOT HYPE		•	*	, , , ,
418		*INTEGRATED				ATTACHED			*10 3		*SONIC WIND TU		11 LUIML	*	
		**************************************			TICK	ATTACHED	r IUI+		- -		*SUNIC WIND TO	4		•	
104,4		*S 3.5 FOOT			τ 		*		- •		114E F	Ţ		-π •₩	
		*ONIC WIND T			т ш		*		- -		 	<i>T</i>		•	
			OMMET *		·π		**		T-		т ш	±.		±	
		*(IA18)	*		¥		*		* .		不	**		*	
		不	*		*		*		*		*	*		*	

					WIND '	TUNNEL TEST	/	DMS DATA	PROCES	SSING						163
~~~~~			+		*		*		*MODE!	· L	*		*	COGNIZANT	*	BASIC
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	E+ TE	STING	*	TEST DMS	*PU	BLICATIONS
ID	*	REPORT TI	TTLE *	TESTED	*	PURPOSE	*	TEST	+MACH	RANG	E* AG	RENCY	*	PERSONNEL	90* 	COMMENTS
		,						_								
LERC				SRB-BODY ALONE		IC STABILIT		ORCE	*0 02					ANE RADFORD/I UL RAMSEY/NA:		
10SWT				SRB-BODY WITH PRO					*2 0		*LERC				3A~*rc	B . 1975
035		C MODEL 454		TURBANCES		MBLING RE-E	NT*		*2 7			BY 10-FOOT		E. VAUGHN	*	
SAGF		E 142 INCH			*RY		*		*		*SUPE			E VAUGHN	*	
CR-134,		ROCKET BOOS			*		*		*		*U IL	MMEL.	*∪ *-D		4	
		STED IN THE			*		*		*		- <b>₹</b>		*~0	MS	- T	
		10-F00T SW1			*		*		*		*		*		ж	
		CH NUMBERS			*		*		*		*		*			
	*	AND 2 7 (SA	46F) *		*		*		*		*					
	*		*		*	entev allben	~~*	onor	* ~ ~ ~ 41	<del>.</del> /	* * * * * * * * * * * * * * * * * * * *	,	- A-A	D MILAM, R	1 +DM	S-DD-2162
ARC		+		140 A/B, VEHICLE				UKÇE	*0 01! *5.3		*ARC	/		GILLINS/ROCK		
		IGATIONS ON		4		STABILITY A			*10 3			FOOT UVDE		INTERNATIONAL		v , 15/4
187		O15-SCALE				ROL CHAR D			* 10 3					J. FRICKEN	·	
0A36		CONFIGURATI				CLE 4, ANAL ERODYNAMIC			τ -		*NEL	C WIND TO	*-D		•	
CK-134,		THE ROCKWEL				M AREAS, CO			<b>↑</b>		+		*		*	
		RNATIONAL S				M AREAS, CO SURFACE EFF			- -		*		sk		*	
						NESS, AND R			٠ •		*		*		*	
		THE NASA/AN				S NUMBER EF					·		•		*	
		SEARCH CENT -FOOT HYPER				NCLUDING SE			*		*		*		*	
		WIND TUNNEL	-			ON AND INTE			**		*		*		*	
		ATIAD LOIMAET	L (UMSO)		*EREN		1 L L L		*		*		*		*	
		,	· •		*	uc 3	*		*		*		*		*	
LARC		AERODYNAMIO	. neein *	1404 /R	*THE	PRIMARY OBJ	FC*F	ORCE	* 0 0	15 /	+LARC	. /	*3	H CAMPBELL	/ R*DM	S-DR-2163
UPWT		TS OF A SUF		(40K) G		OF THIS TE		01.02	+2 5		*LARC		* Ī			PT , 1974
1097		YSTEM INTER				TO DETERMIN			*4 63				W*W.	R EMBURY	/ R*	•
0A20B		E EFFECTS				EXTENT	*		*			TUNNEL	* I		*	
		NDUCTED AT			–	DYNAMIC SIM			*		+		* M	M. MANN	*	
UN 104,		ARC UPWT US	,			N IS AFFECT			*		*		*-D		•	
		0 015-SCALE				ASE MOUNTIN			*		*		*		*	
		L OF THE CO				RBITER MODE			+		*		*		*	
		ATION 140A				OUT MPS NOZ			*		*		*		*	
		ORBITER (OA				DN A STRAIG			*		*		*		*	
	*		*		*STIN		*		*		*		*		*	
					4				4						*	

			WIND TUNN	EL TEST /	DMS DATA	PROCE	SSING			164
	*	*	*	*		+MODE!	* L *		COGNIZANT	* BASIC
TEST		* CONFIGUR			TYPE OF				TEST DMS	*PUBLICATIONS
ID	+ REPORT 1	TITLE * TEST	FED * PURI	**************************************	TEST	*MACH	RANGE*	AGENCY	PERSONNEL	*OR COMMENTS
CALSPAN	- +HFAT TRANS	SFER TES*MODEL 37-0	IT (CONF*TO DETER	MINE ASCE+	4FAT-TPANS	S*0 01	/ +1	ROCKWELL/ :	ED HEUSTIS/CALSP	A*DMS-DR-2164
48HST		O1-SCAL*IG 3 ORB				*6 95			N CORP	*VOLUME 01
173-100		CONFIG*CONFIGURA				*19 5	+4	18-INCH HYPERS	M KOTCH/R I	*JAN , 1976
0H12	*URATION 3	SPACE S*RBITER	*VER A RAI	NGE OF MA+		*	*{	ONIC SHOCK TUN		*
IH21	*HUTTLE ORE	BITER AN*EXTERNAL '	TANK *CH NO. A	ND REYNOL*		*	*1		W B. MEINDERS	*
CR-141,8	828*D TANK (37	7-OT)IN *	*DS NO 0	F PARTICU*		*	*	:	r-DMS	*
	*THE CALSPA		+LAR INTE	REST WAS *		*	*	:	(	*
	*CH HYPERSO		*ORBITER '	WING LEAD*		*	+	•	•	*
	*OCK TUNNET	_ (OH12/*	*ING EDGE			*	*		k	*
	*IH21)	*	*DURING E	ALKA *		*	*	:	<b>.</b>	*
	*	*	*	*		*	*		r .en lieustis/olist	*
CALSPAN 48HST		FER TES*MODEL 37-0 O1-SCAL*IG 3 DRB				5*6 95 *19 5			FED HEUSTIS/CALSF *N CORP.	*VOLUME 02
		CONFIG*CONFIGURA				*			M KOTCH/R I	
0H12	•	SPACE S*RBITER		VGE OF MA*		*			W B. MEINDERS	*
IH21		SITER AN*EXTERNAL				*			×-DMS	*
CR-141.8	829+D TANK (37		*DS NO O			*	*		*	*
	*THE CALSPA		*LAR INTE	REST WAS *		*	*		*	*
	*CH HYPERSO	INTC SH *	*OPRITED	WING 1 FAD&		*	*		•	*
	*OCK TUNNEL	(OH12/*	*ING EDGE	HEATING *		*	+		*	*
	*IH21)	*	+DURING E	VTRY *		*	+		*	*
	*	*	*	*		*	+		+	*
CALSPAN	- *HEAT TRANS	SFER TES*MODEL 37-0	T (CONF*TO DETER	MINE ASCE*	HEAT-TRAN	S*O 01	/ +		red Heustis/Cals	
48HST	- *TS DN A O.	O1-SCAL*IG 3 ORB	AND ET) *NT AND E	NTRY HEAT*		*6 95			*N CORP.	*VDLUME O3
173-100	/*E ROCKWELL	. CONFIG*CONFIGURAT	TION 3 O*TRANSFER	RATES O *		*19 5			*M KOTCH/R.I	*DEC , 1975
0H12	*URATION 3	SPACE S*RBITER	*VER A RA	NGE OF MA*		*		ONIC SHOCK TUN		*
IH21	<b>⊁HUTTLE ORE</b>	BITER AN*EXTERNAL	TANK *CH NO A	ND REYNOL*		*			*W B. MEINDERS	*
CR-141,8	830*D TANK (37	7-OT)IN *	*DS NO 0	F PARTICU*		*	*		*-DMS	*
	*THE CALSPA	N 48-IN*	*LAR INTE	REST WAS *		*	*		*	*
	*CH HYPERSO		*ORBITER	WING LEAD*		*	*		*	*
	*DCK_TUNNEL	_ (OH12/*	*ING EDGE			*	*		*	*
	*IH21)	*	*DURING E	NTRY *		*	*		*	*
	*	*	*	*		*	*		*	*

			WIND TUNNEL TEST	/ DMS DATA	PROCESSING	) 			165
	*	*	*	*	+MODEL	*	* COGNIZANT	* BASI	С
TEST	*	* CONFIGURATIONS	* TEST	* TYPE OF	* SCAL	.E∗ TESTING	* TEST DMS	*PUBLICA	TIONS
ID	* REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RANG	E* AGENCY	* PERSONNEL	*OR COMM	IENTS
									0.405
FC -	- *RESULTS OF AN I	NV+EXTERNAL TANK WI	T+DETERMINE STATIC	+PRESSURE	+0 003 /	*MSFC /		MSF+DMS-DR-	
TWT -	- *ESTIGATION OF A	N *H AND WITHOUT PR	O*PRESSURE DISTRIB	:U*	*1 96 -	+MSFC -	*C	*VOLUME	
16	/*O 003-SCALE SPA	CE*TUBERANCES,O 003		D*	*4.96		DN*G W WINKLER ,	/ NS*DEC.,	1975
2F	*SHUTTLE EXTERNA	L *SCALE	*MCR 0200	*	*	*IC WIND TUNN	-	*	
-141,82	23+TANK (MSFC MODE	L *	*EXTERNAL TANK	*	*	*	*V W. SPARKS	*	
•	*460) IN THE NAS	Δ/*	*	*	*	*	*D E. POUCHER	*	
	+MSFC 14 X 14-IN	CH*	*	*	*	*	*-DMS	+	
	*TRISONIC WIND T	υ *	*	*	+	*	*	*	
	*NNEL TO DETERMI	NE*	<b>+</b>	*	*	*	*	*	
	+STATIC PRESSURE	*	*	*	*	+	*	*	
	*DISTRIBUTIONS	DU*	*	*	+	*	*	*	
	*RING REENTRY (T		*	*	*	*	*	*	
	*F)	*	*	*	*	*	*	*	
	* ′	*	*	*	*	*	*	*	
FC -	- *RESULTS OF AN I	NV*EXTERNAL TANK WI	T*DETERMINE STATIC	*PRESSURE	*0.003 /	*MSFC /	*P.E RAMSEY /	MSF*DMS-DR-	2165
TWT	- *FSTIGATION OF A	N *H AND WITHOUT PR	O*PRESSURE DISTRIB	!U⁴	*1.96 -	*MSFC ~	*C	*VOLUME	02
6	/+O OO3-SCALE SPA	CE+TUBERANCES, 0.003	*TIONS ON MODIFIE	D*	<b>*4 96</b>	*14-INCH TRIS	DN*G W. WINKLER ,	/ NS+DEC .	1975
2F	*SHUTTLE EXTERNA		*MCR 0200	*	*	*IC WIND TUNN	EL*I	*	
	24+TANK (MSFC MODE		*EXTERNAL TANK	*	*	*	*V W SPARKS	*	
141,02	*460) IN THE NAS		*	*	*	*	*D. E. POUCHER	*	'A O
	+MSFC 14 X 14-IN		*	*	*	*	*-DMS	*	ORIGINAL OF POOL
	+TRISONIC WIND F		*	*	+	<b>*</b>	*	*	~ ~
	*NNEL TO DETERMI		•	*	*	*	*	*	"O ##
	*STATIC PRESSURE		· *	*	*	*	*	*	0 2
	*DISTRIBUTIONS		*	*	*	*	*	*	<b>9</b> F
	*RING REENTRY (T		*	*	*	*	+	*	20 1
	*F)	# *	*	*	*	*	*	*	O
	* F J	···	He	*	*	*	*	*	QUA
	*	*	<b>T</b>		•	•			QUAL
									<u>-</u> -₹,
									< €

			WIND TUN	NEL TEST /	DMS DATA	PROCES	SING						166
* TEST + ID + RE	* EPORT TITLE +	CONFIGURATIONS TESTED		TEST RPOSE	* * TYPE OF * TEST		SCALE	* TESTIN * AGENCY		TE	OGNIZANT ST DMS ERSONNEL	*PUBLIC	ATIONS
141W1 - *EST) 596 /*O.OC TA2F *SHUT CR-141,825*TAN +460) *MSFC *TRIS *NNEL +STAT *DIST	[GATION OF AN *Ի		)*PRESSURI	DISTRIBU MODIFIED D	k	*0 003 *1-96 *4 96 * * * * * * * *	-	*MSFC	- *C TRISON*G TUNNEL*I *V	: i.W ' W	•	MSF*DMS-DR *VOLUME / NS*DEC  *  *  *  *  *  *  *  *  *  *  *  *	03
14TWT - *ESTI 596	GATION OF AN *H 03-SCALE SPACE*T TLE EXTERNAL *S		+PRESSURE	DISTRIBUE MODIFIEDE	k	*0.003 *1.96 *4.96 * * * * * *	- ′	*MSFC *MSFC *14-INCH *IC WIND * * * *	- *C TRISON*G TUNNEL*I *V	: i.W ' W		** MSF*DMS-DR *VOLUME / NS*JAN .  *  *  *  *  *  *  *  *  *	04

ORIGINAL PAGE IS

				WIND TO	UNNEL TEST	. /	DMS DATA	PROCESS	ING				<b></b>	167
	*	*		*		*		*MODEL	*	*	*	COGNIZANT	* BA	SIC
TEST	r 🛊	+	CONFIGURATIONS	*	TEST	+	TYPE OF		CALE	+ TESTING	*	TEST DMS	*PUBLI	CATIONS
ID	* REPORT TITL	*	TESTED		PURPOSE	*	TEST		ANGE	* AGENCY	*	PERSONNEL	*OR CO	MENTS
		- 							<del></del>					
									, ,			- numery / I	40 E # D880 D	0.465
FC	- +RESULTS OF AN							+0.003	/ *		*P 6	. RAMSEY / I	יט−פואט∗זכוי VDLUM*	
TWT	- *ESTIGATION OF							*1 96 -		*MSFC -	-	WINKLER /		1975
6	/+0 003-SCALE SE		· · · · · · · · · · · · · · · · · · ·			ED*		*4 96		+14-INCH TRI		MINNER /	NOTOEC ,	1975
2F	+SHUTTLE EXTER		CALE	*MCR O		*		*		IC WIND TUP		M CDADIC	*	
-141,	,827+TANK (MSFC MOI	_		*EXTER	NAL TANK	*		*	×	*		W SPARKS	4	
	*460) IN THE NA	4SA/*		*		*		*	۲	*		E POUCHER	**	
	+MSFC 14 X 14-1			*		+		+	*	*	*-DN	15	*	
	*TRISONIC WIND			*		*		*	*	<b>*</b>	*		*	
	+NNEL TO DETERM			*		*		*	k	*	*		*	
	+STATIC PRESSU			*		*		*	*	*	*		*	
	*DISTRIBUTIONS			*		*		*	k	*	*		*	
	*RING REENTRY	(TA2*		*		*		*	4	*	*		*	
	*F)	*		*		*		*	4	+	*		*	
	*	*		*		*		*	4	*	*		*	
₹C	- *HEAT TRANSFER	TES*0	RB +ET+SRB	*TO IN	VESTIGATE	PA*	HEAT - TRANS	S* 37 -	*	*RI /	*D 0	WALSTAD/R	t *DMS-D1	₹-2166
ΝT	- *TS OF AN 0.006	SC*E	т	*RAMETI	RICALLY TH	E *		* 3 7	*	*LARC -	∗R.L	. STALLINGS,	/LA*JULY,	1975
41	/*ALE THIN-SKIN	SPA*S	RB	*ASCEN	T HEATING	OF*		*	*	*UNITARY PL/	AN W∗RC		*	
16	*CE SHUTTLE THI			*THE I	NTEGRATED	*		*	4	IND TUNNEL	*ປ 1	DAVIET	*	
- 141.	534*COUPLE MODEL			*VEHIC	LE	*		+	*	*	*-D#	1S	*	
	*OTS) IN THE LA			*		*		*	*	*	*		*	
	*EY RESEARCH C			*		*		+	*	*	*		*	
	*R UNITARY PLAN			*		*		*	*	*	*		*	
	*ND TUNNEL AT			*		*		*	×	*	*		*	
	*7 (IH16)	*		*		*		*	4	<b>+</b>	*		*	
	*			*		*		*	×	*	*		*	
С	- *RESULTS OF AN	TMV*1	Δ0λ /R	*ORTATI	N INCREMEN	1+Δ+1	FORCE	*0 015	/ *	*ROCKWELL/	*M	D MILAM AND	R+DMS-D	R-2167
C 5HWT			TURY W		A ON THE			*5 3 -		*ARC -	* L	GILLINS/RO	CK*AUGUS	r, 1975
0 0	/*O 015-SCALE M				DF A STING			*10 3			/PER*WEI	GILLINS/ROLL INTERNATION	NA*	-
98	*(49-0) OF THE				ON BASE PE			*		*SONIC WIND	TUN*L		*	
	*(49-0) OF THE .550*KWELL INTERNA				AND FORCE	-		*		*NEL	*J	CLEARY/NASA	AM*	
- 141,					ATAD TORG			*		*	*ES		*	
	*AL SPACE SHUT				RIOUS SURF					de		A SARVER	*	
	*ORBITER IN THI					HC*		•		···		G MCDONALD	*	
	*SA AMES RESEAT			∗¢ ሀይት!	LECTIONS	47 JL				•	*-DN		*	
	*CENTER 3.5-FO			*		*		T.		T -	Dii		*	
	*YPERSONIC WIN	∗טד כ		*		*		<del>*</del>	,	7 4	- -		*	
	*NNEL (DA98)	*		*		*		₹ .t.	γ 	T 	·		*	
	*	*		*		*		不	,	<del>7</del>	~		•	

							MIND	TUNNEL TEST	1	DMS DATA	PROCE	SSI	NG						16
	*			*			*		*		*MODE	 L				+	COGNIZANT	* BAS	SIC
TEST	*			*	CONFIGURA	TIONS	*	TEST	+	TYPE OF	*	ŞC	ALE	* TESTING		* -	TEST DMS	*PUBLIC	CATION
ID	*	REPORT	TITLE	*	TESTE	D	*	PURPOSE	*	TEST	*MACH	RA	NGE	AGENCY		*	PERSONNEL	*OR COM	MENTS
		-																<del> </del>	
ARC Fht								BETTER DEFIN		IEAT-TRAN				LARC /			ID A. THROCK		
			AND GAPS		SYSTEM			HEATING WHI			*10 3			*LARC -			N/LARC	*MAY,	197
7 A32			LE ARRAY					TILE SURFAC			*10 3						M. MOSER JR.	*	
43∠ Vi-X	_		BULENT FL	_				GAP WALLS W	-		*			W HYPERSOI	NIC I	* ~ UM: 	5	*	
71945	**	W AT MAY	CH 10 3					EXPERIENCE;			*			*UNNEL		*		*	
7 1545				T				ARE PART OF	. [*		*			*		*		*	
				.T.			*PS		*		*			*		*		*	
RC	_ +D	COLUTE (	SE A DOCC	**	ALINIOLI VELIT		*	DTAIN DOCC	*	DECEMBE	*		,	*		**		*	0.400
TWT			OF A PRES		AUNCH AGUT	CLE 5		OBTAIN PRESS					•	*ARC /			J DZIUBALA,		
19		-						ISTRIBUTIONS		URGE	*0.6	-		*ARC -			HEE, M. D. M		
19 481A			ON A O OS Model (47					CE DATA, AND			*2 5			*11-FOOT T				*úAN . *	197
			THE INTE					E MOMENTS	*		+			*NIC WIND				*	
C- 144 1 4 0								THE INTEGRAT	ED*		*			*L (UNITAR	-		M MANN	*	
			PACE SHUT				*LAUI	ACH AEHICLE	*		*			*		*-DM	15	*	
			CLE CONFI 5 IN THE				*		*		*			ж.		*		*	
							*		**		*			*		**		* 	
			RESEARC				*				*			¥ 		*		*	
			11 X 11				*		*					#* 		* -L		# 	
			OF THE U				ж		- AT		*			T 		**		T-	
			AN WIND				*				本 .s.			<b>Y</b>		*		·	
		UME 1 OF	[AB1A] VO	)* *			*		*		<b>≫</b> .t.			π 		*		*	
	* L	UME I U	. ,	*			*		*		*			*		*		*	
		COURTS (		*			*		*	DECOURE	*		,	* • • • • •		* T		* DMC DE	
RC ITWT					AUNCH VEHI			OBTAIN PRESS						*ARC /			J. DZIUBALA.		
9			OS INVEST ON A O OB					ISTRIBUTIONS		URCE	*0 6	_		*ARC - *11-FOOT T			HEE, M D M		
81A	-							CE DATA, AND			*2 5 *							*JAN ,	191
_			MODEL (47 THE INTE					E MOMENTS	*		*			*NIC WIND ' *L (UNITAR'		*U . *M*		* *	
( = 14 1 , c		- •						THE INTEGRAT	FD*		*			*L (UNITAR		*™ *∸DM		*	
			PACE SHUT				*LAUI	NCH VEHICLE	*		*			<b>₩</b>		* " UM	15	•	
			CLE CONFI				*		*		<b>*</b> .s.					- -		т	
			5 IN THE				*		*		<b>*</b> ⊀			<b>▼</b> .b.		*		*	
			RESEARC				at.		*		*			*		-		т -	
			11 X 11				*		*		*			म 		*		*	
			OF THE U				*		*		*			*		*		*	
			AN WIND				*		*		*			*		*		*	
			(A81A) VO	1*			*		*		*			<b>*</b>		*		*	
	*L	UME 2 OF	. 1	*			*		*		*			*		*		*	

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						WIND	TUNNEL TE	ST /	DMS DATA	PROCES	SSING		<i></i>			. <i>-</i>		169
	*		 +			*		*		*MODE	_	*		*	COGNIZANT	*	BASIC	;
TEST	*		*	CON	FIGURATIONS	*	TEST	*	TYPE OF	+	SCALE	* TEST	ING	* 1	TEST DMS		JBLICAT	
ID	*	REPORT TI	TLE *		TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENO	CY	*	PERSONNEL	*OR	COMME	NTS
			·															
		CULTC OF	A DD#C#	. ALINIOI	u veniore e	+70	OPTAIN DDE	eello+a	DESCRIPE	*0 03	1	*ARC	1	*T :	J DZIUBALA	A. E*DM	S-DR-2	169
RC					H VEHICLE 5		ISTRIBUTIO			+0 6		+ARC	-	* CF	HEE, M D	MIL*VO	LUME C	3
1TWT		RE LOADS	_				CE DATA, A		ONGE	*2 5		*11-F001					N,	
19		ATION ON					E MOMENTS	*		*					SARVER	*		
A81A		SCALE MOD					THE INTEGR			*		+L (UNI)			MANN	*		
K-141,8		TS) OF TH					NCH VEHICE			*		*		*-DM		*		
		ATED SPAC				≁ CAU	MOUL AFLITOR			*		*		*	-	*		
		E VEHICLE				•				*		*		*		*		
		RATION 5 Sa ames f				**		*		*		*		*		*		
		CENTER 11				· ·		*		*		*		*		*		
								*		*		*		*		*		
		OT LEG OF TARY PLAN				*		*		*		*		*		*		
		NNEL (IA								*		*		*		*		
		ME 3 OF 7				*				*		*		*		*		
	* 1.0	ME 3 OF A	Ţ			*		*		*		*		*		+		
RC	DE	CHITC OF	A DDES+	A ALIMO	H VEHICLE 5	*TO	DRIATA DRI	SSHR*P	RESSURE	*0 03	/	*ARC	/	*T. 0	J DZIUBAL	A. E*DM	15-DR-2	169
TWT		RE LOADS			n venitore o		ISTRIBUTIO			*0 6	•	*ARC	<u>_</u>		IEE. M D			
19		ATION ON					CE DATA,		ONOL	*2 5		+11-F001	TRANS					1976
A81A	•	SCALE MOD					E MOMENTS	*		*					SARVER	*		
		TS) OF TH					THE INTEGR			*		*L (UNIT	(ARY	*M. N	MANN	*		
K-141,C		ATED SPAC					NCH VEHICE			*		*	,	*~DMS	3	*		
		E VEHICLE				*		*		*		*		*		*		
		RATION 5				*		*		*		*		*		*		
		SA AMES F				*				*		*		*		*		
		CENTER 1				*		*		*		*		*		*		
		OT LEG OF				*		*		*		*		*		*		
		TARY PLAN				*		*		*		*		*		*		
		NNEL (IA				*		*		*		*		*		*		
		IME 4 OF 7	•			*		*		*		+		*		*		į
	* LU	ME 4 UF A	,			*		4		*		*		*		*		Ţ
	~		7	-		••		•										-

			WIND TUNNEL TEST	/ DMS DATA	PROCESSING				170
	* *		*	*	*MODEL	*	* COGNIZANT	* BASIC	c
TES1		90111 TUDICH ( 2011)		* TYPE OF		* TESTING	* TEST DMS		
	* REPORT TITLE *	TESTED	* PURPOSE	* TEST	*MACH RANGE	E* AGENCY	* PERSONNEL	*OR COMM	ENTS
ARC	- *RESULTS OF A PRES*	LAUNCH VEHICLE 5	*TO ORTAIN DDESSIII	2+DDECCIDE	*0 03 /	+ARC /	*T J. DZIUBALA,	E+DMC_DD_/	2460
11TWT	- *SURE LOADS INVEST*		*E DISTRIBUTIONS.		*0 6 -	*ARC -	*. CHEE. M D N		
019	/*IGATION ON A 0.03*	•	*FORCE DATA, AND I			+11-FOOT TRANS		*JAN ,	1976
IA81A	*O-SCALE MODEL (47*	:	*INGE MOMENTS	*	*	*NIC WIND TUNN		*	*
CR-141,	840*-OTS) OF THE INTE*	r	*ON THE INTEGRATE	)*	*	*L (UNITARY)	*M M. MANN	*	
	*GRATED SPACE SHUT*	:	*LAUNCH VEHICLE	*	*	*	*-DMS	*	
	*TLE VEHICLE CONFI*	:	*	*	*	*	*	*	
	*GURATION 5 IN THE*	:	*	*	*	*	*	*	
	*NASA AMES RESEARC*		*	*	*	*	*	*	
	*H CENTER 11 X 11 *		*	*	*	*	*	*	
	*FOOT LEG OF THE U*		*	*	*	*	*	*	
	*NITARY PLAN WIND *		*	*	*	*	*	*	
	*TUNNEL (IA81A) VO+		*	*	*	*	*	*	
	+LUME 5 OF 7 *		*	*	*	*	+	*	
	* *		*	*	*	*	*	*	
ARC	- *RESULTS OF A PRES*	LAUNCH VEHICLE 5	*TO OBTAIN PRESSUR	R*PRESSURE	*0.03 /	*ARC /	*T. J DZIUBALA,	E*DMS-DR-2	2169
11TWT	- *SURE LOADS INVEST*		*E DISTRIBUTIONS,	*FORCE	*O 6 -	*ARC -	*. CHEE. M D N	NIL*VOLUME (	06
019	/*IGATION ON A O O3+		*FORCE DATA, AND I	<del>-</del>  *	*2.5	*11-FOOT TRANS	O*AM/RI	*JAN ,	1976
APBAI	*O-SCALE MODEL (47*		*INGE MOMENTS	*	*	+NIC WIND TUNN	E*D A SARVER	*	
CR-141,	841*-OTS) OF THE INTE*		<b>*ON THE INTEGRATED</b>	<b>)</b> *	+	*L (UNITARY)	*M M MANN	*	
	*GRATED SPACE SHUT*		*LAUNCH VEHICLE	*	*	*	*-DMS	*	
	*TLE VEHICLE CONFI*		*	*	*	*	*	*	~ ~
	*GURATION 5 IN THE*		*	*	*	*	*	*	ORIGINAL OF POOR
	*NASA AMES RESEARC*		*	*	*	*	*	*	;
	*H CENTER 11 X 11 *		*	*	*	*	*	*	70 <u>12</u>
	*FOOT LEG OF THE U*		*	*	*	*	*	*	$Q \ge$
	*NITARY PLAN WIND *		*	*	*	*	*	*	무선
	*TUNNEL (IA81A) VO*		*	*	*	*	*	*	
	*LUME 6 OF 7 *		*	*	*	*	*	*	(O) 7
	* *		*	*	*	*	*	*	QUALITY

	WIND TUNNEL TEST / DMS DATA	PROCESSING	171
* * TEST * * CONFIGURATIONS ID * REPORT TITLE * TESTED	* * TEST * TYPE OF * PURPOSE * TEST	* * COGNIZANT  * SCALE* TESTING * TEST DMS  *MACH RANGE* AGENCY * PERSONNEL	* BASIC *PUBLICATIONS +DR COMMENTS
019	*E DISTRIBUTIONS, *FORCE *FORCE DATA, AND H* *INGE MOMENTS * *ON THE INTEGRATED* *LAUNCH VEHICLE *  * * * * * * * * * * * * * * * * * *	*O O3	IL*VOLUME 07 *JAN , 1976  *  *  *  *  *  *  *  *  *  *  *  *  *
*1 FOOT LEG OF THE*  *NASA/AMES RESEAR *  *CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(IA19) *	* * * * * * * *	*	ORIGINAL OF POOR
* *	* *	* * *	PAG QUA

ALITY

TEST	TA PROCESSING	DMS DATA	WIND TUNNEL TEST /				
TEST	*MODEL * * COGNIZANT * BASIC		*		*	*	
TESTED   * PURPOSE * TEST *** *** *** *** *** *** *** *** *** *		TYPE OF	* TEST		*		
11TWT - *PLUME EFFECTS TES*		TEST	* PURPOSE	TESTED	REPORT TITLE *	*	1D
TIVT - *PLUME EFFECTS TES*		Fonor	*TO OPTAIN ELEVON	I ALINCH VEHTCHE E	ESULTS OF A JET *1	- *RI	RC
**************************************	, , , , , , , , , , , , , , , , , , , ,			CHONON VENTOLE S	LUME EFFECTS TES*	- *P	
## **INTERNATIONAL IN * * ** ** ** ** ** ** ** ** ** ** ** *							14
R-141,544*TEGRATED SPACE SH*  *UTTLE VEHICLE USI*  *NG A VEHICLE 5 CO*  *NFIGURATION O 02-+  *SCALE MODEL (88-0*  *1 FOOT LEG OF THE*  *NASA/AMES RESEAR *  *CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(L (UNITARY) *D A. SARVER *  *W B MEINDERS *  **  **  **  **  **  **  **  **  **	in the state of th						A 19
*VITTLE VEHICLE USI*  *NG A VEHICLE 5 CO+  *NFIGURATION O 02-+  *SCALE MODEL (88-0+  *TS) IN THE 11 X 1*  *NASA/AMES RESEAR *  *CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(IA19)  **  **  **  **  **  **  **  **  **	WIS WIND TOWNE T						₹-141.
*NG A VEHICLE 5 CO *							·
*NFIGURATION O 02-+  *SCALE MODEL (88-0+  *SCALE MO	THE DIRECTIONS		*				
*TS) IN THE 11 X 1*  *1 FOOT LEG OF THE*  *NASA/AMES RESEAR *  *CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(1A19)  **  *CRC - *RESULTS OF A JET *LAUNCH VEHICLE 5 *TO OBTAIN ELEVON *FORCE *O 02 / *ARC / *S.L TREON/AMES R*DITWT - *PLUME EFFECTS TES*  11WT - *PLUME EFFECTS TES*  14	* * * * * * * * * * * * * * * * * * *		*				
*1 FOOT LEG OF THE*  *NASA/AMES RESEAR *  *CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(1A19)  **  **  **  **  **  **  **  **  **	*		+		CALE MODEL (88-0+	*50	
*NASA/AMES RESEAR *  *CH CENTER UNITARY*  **PLAN WIND TUNNEL *  *(IA19)  **  **  **  **  **  **  **  **  **	* * * *		*		S) IN THE 11 X 1*	*T	
*CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(IA19)  *  *  *  *  *  *  *  *  *  *  *  *  *	* * *		*				
*CH CENTER UNITARY*  *PLAN WIND TUNNEL *  *(IA19)  *  *  *  *  *  *  *  *  *  *  *  *  *	· · · · · · · · · · · · · · · · · · ·		*		ASA/AMES RESEAR *	*N/	
* (IA19) * * * * * * * * * * * * * * * * * * *	* * *		*				
*	* *		*		LAN WIND TUNNEL *	*P[	
1TWT - +PLUME EFFECTS TES*	* * *		*		(A19) *	+(]	
TTWT - +PLUME EFFECTS TES*  14	* * *		*		*	*	
## HINGE MOMENTS AND*PRESSURE *0 9 - *ARC - *ESEARCH CENTER *VI	+0 02 / +ARC / +5   TREON/AMES D*DMS*DD*21	FORCE	*TO OBTAIN ELEVON	LAUNCH VEHICLE 5	SULTS OF A JET ≁L	- *RE	RC
14	E *O 9 - *ARC - *ESEARCH CENTER *VOLUME OS				LUME EFFECTS TES*	- +P[	1TWT
A19 *INTERNATIONAL IN * *CTS OF JET PLUMES* * *NIC WIND TUNNE*. * *  R-141,545*TEGRATED SPACE SH* *ON PRESSURE DIST * * *L (UNITARY) *D A SARVER *  *UTTLE VEHICLE USI* *RIBUTIONS * * * * * * * * * * * * * * * * * * *					ON THE ROCKWELL*	/*T	14
R-141,545*TEGRATED SPACE SH*	11 100 1111100 11111 112011020, 111 1 00110;				NTERNATIONAL IN *	* I N	
*UTTLE VEHICLE USI*	· · · · · · · · · · · · · · · · · · ·	:			EGRATED SPACE SH*	545*TE	R-141,
* * * * * * * * * * * * * * * * * * *	_ ,						
*NFIGURATION O 02-*	· · · · · · · · · · · · · · · · · · ·		*		A VEHICLE 5 CO*	+N0	
*TS) IN THE 11 X 1*	* * *		*		FIGURATION O 02-*	*NF	
	* * *	,	*		CALE MODEL (88-0*	*\$0	
*1 FOOT LEG OF THF*	* * *	:	*		5) IN THE 11 X 1*	*T5	
	* * *	,	*		FOOT LEG OF THE*	* 1	
*NASA/AMES RESEAR *	* * *	,	*		ASA/AMES RESEAR *	*NA	
*CH CENTER UNITARY* * * * * *	* * *	:	*				
*PLAN WIND TUNNEL * * * * * * *	* * *	:	*				
*(IA19)	* * *	:	*		(A19) *	*(I	
* * * * * * *	* * *	:	*		*	*	

							WIND	TUNNEL TE	ST /	DMS DATA	PROCES	SSING					173
		 *		*	. = = = =		*		+		*MODE!	. *	,	*	COGNIZANT	* BAS	IC
TEST	•	*		*	CONFIGURAT	_		TEST	*	TYPE OF			* TESTING * AGENCY	* 1	TEST DMS PERSONNEL	*PUBLICA *OR COM	
ID	· <b>-</b>	* 	REPORT TITU	.E * 	TESTED	, 	* 	PURPOSE	*	TEST		RANGE	AGENCI				
20			CHUTC OF P	SECCIO-	MOC ODDITED		*UBT *	IN PRESSU	DE D*B	DESCUBE	*0.01	/ *	ARC /	+W #	H. DYE/RI	*DMS-DR	-2171
RC			DISTRIBUT		140C ORBITER			IN PRESSU		RESSURE	*7 4	•	ARC -		MARVIN/ARC	+VOLUME	
. 5MW I			STS OF A O				🕶	HEATING L			*10 4		3 5-FOOT HYP			*JAN.,	
138	′		LE SPACE SH					FOR HIGH			*		SONIC WIND T			*	
	Ko.		ORBITER MOU					DF ATTACK			*	*	NEL	*-DMS	3	*	
(" (44)	30-		-O) IN THE					NUMBERS			*	*	k	*		*	
			RC 3 5-F00				*D 10		*		*	*	,	*		*	
			SONIC WIND				+		*		*	+	k	*		*	
			( GH38 )	*			+		*		*	*	ŧ	*		*	
		*	. ( 000 )	*			*		*		*	4	k	*		*	
c	_	*RE	SULTS OF PE	RESSU*:	40C ORBITER	2	+OBTA	IN PRESSU	RE D*P	RESSURE	+0 01	/ *	ARC /	*W }	i. DYE/RI	*DMS~DR	-2171
			DISTRIBUT				*ISTR	IBUTIONS	AT H*		<b>*7</b> 4	- +	ARC -	*10E	MARVIN/ARC	*VOLUME	
8			TS OF A O.C				*IGH !	HEATING L	OCAT+		+10 4	*	3.5-FOOT HYP	ER*D #	SARVER	, NAU∗	1976
138	′		LE SPACE SH				*IONS	FOR HIGH	ANG*		*	+	SONIC WIND T	UN*W. E	MEINDERS	*	
	585		ORBITER MOD				*LES	DF ATTACK	AT *		*	*	*NEL	*-DMS	5	*	
			-D) IN THE				*MACH	NUMBERS	7 AN+		*	+	•	*		*	
			RC 3.5-F00				*D 10		*		*	+	*	*		*	
		+ER	SONIC WIND	TUNN*			*		*		*	*	k	*		*	
		*EL	. ( OH38 )	*			*		*		*	*	<b>K</b>	*		*	
		*		*			*		*		*	, *		*		*	
₹C	-	+RE	SULTS OF PE	RESSU+	140C ORBITER	•		IN PRESSU		RESSURE		•	ARC /		1. DYE/RI	*DMS-DR	
. 5HWT	-	*RE	DISTRIBUT:	*T NO				IBUTIONS			<b>*7</b> 4		ARC -		MARVIN/ARC	*VOLUME	-
8		/*ES	STS OF A O C	010-S*				HEATING L			*10 4		3 5-FOOT HYP			*JAN ,	1976
138		*CA	LE SPACE SH	⊀UTTL*				FOR HIGH			*		SONIC WIND T			*	
२- 144 ,	588		ORBITER MO					DF ATTACK			*	*	NEL	* - DMS	•	*	
			I-O) IN THE					NUMBERS	7 AN*		*	*	<b>r</b>	*		*	
			RC 3.5-F001				*D 10		*		*	*	r	#			
			SONIC WIND	TUNN*			*		*		*	*	,	<i>#</i>		<b>*</b>	,
		*Ei	. ( OH38 )	*			*		*		*	,		* •			
		*		+			+		*	EAT TOAK	*	7E / 1	ent /		E. TILLEY II	T*DMC-DD	-2172 1974
ARC	-	+RE	SULTS OF RI	EACTI+S	SV ORBITER	CUNF	*10 0	EIERMINE	RUS *F	IEA 1 - I KAP	*3 4	/D / 1	KLARC -	*/LAF		*OCT	1974
OVS					(MODEL 21-						* *		*60-FOOT VACU	•			, ,
289					/L70-000139)			FECTS ON			·		SPHERE VON K			*	
99			AN 0 0175				*DOK 1	NG ON-ORB	T .		*		RMAN FACILIT			*	
(~134,	41		CONFIGURATI				* *		*		*		KMAN TACILIT	*	•	*	
		_	PACE SHUTTLE				*		*		*	*	· •	*		*	
			TER MODEL ( IN THE LARG				т ±		*		*	*	k	*		*	
			OT VACUUM				*		*		*	*	*	*		*	
		*FU	OI VACOUM :	>7□CK*			*		-t		*	*	k	*		*	
		* <u>⊏</u>														*	

OF POOR	ORIGINAL	
QUALITI	7	

TEST																		ACTO
TESTED   PURPOSE   TEST   **** ******************************	~~~	*			*		*	****	*	TVDE 05	_				*	COGNIZANT		
RC - *AERODYNAMIC RESUL*6-OTS		*			*													
4-TWT - *TS OF AN ABORT SE* *DYNAMIC INVESTIGA* *0.32 - *ARC *RI *ULY, 1974 11 /*PARATION EFFECTS * *TIONS * *1 1 *14-FADOT TRANSO*J E. VAUGHN * *A8 *TEST (1A8) CONDUC* * * * * * * * * * * * * * * * * * *			REPURI		*	1 E S I E D	*	PURPUSE		1651	*MACH	RANGE	AGENC	Y ~		PERSUNNEL	*UR C	
4-TWT - *TS OF AN ABORT SE* *DYNAMIC INVESTIGA* *0.32 - *ARC *RI *ULY, 1974  11	RC	- *A	FRODYNA	MTC RESU	l *6	-OTS	*FXP	:RIMENTAL AE	RΩ∗F	DRCF	*0.01	5 / 1	LARC	1	*J.F	I CAMPBELL.II	/*DMS-I	DR-2173
### ##################################						0.0				5,,,5,2				•				
AB *TEST (1AB) CONDUC* *									*					TRANSO		E. VAUGHN		•
## 134,107*TED IN THE MASA/L*  * **ARC 14-FOOT TRANS*  **ONIC WIND TUNNEL *  **ON A MODEL (6-OTS*)  **ON A MODEL (								••	*		*						*	
*ARC 14-FOOT TRANS* *ONIC WIND TUNNEL * *ON A MODEL (6-OTS* *) OF THE ROCKWELL* *INTERNATIONAL LA * *UNCH CONFIGURATIO* *N INTEGRATED VEHI* **CLE * **  SFC - *AN INVESTIGATION *VEHICLE 5 CONFIGU*TO DETERMINE THE *FORCE * ***  **CLE * **  **  **  **  **  **  **  **  **							*		*		*						*	
*ONIC WIND TUNNEL *	10-7,						*		*		*		<u> </u>		*	,~	*	
*ON A MODEL (G-OTS*							*		*		*		4		*		*	
*) OF THE ROCKWELL*  *INTERNATIONAL LA *  *UNCH CONFIGURATIO*  *N INTEGRATED VEHI*  *CLE  **  **  **  **  **  **  **  **  **							*		*		*		k		*		*	
* INTERNATIONAL LA *			<del>-</del>	,							···		·		*		*	
*UNCH CONFIGURATIO*		•					•					Ţ	k		sk:		*	
*N INTEGRATED VEHI+							·				•		·· •		*		*	
*CLE							<b>*</b>				4	,	k		*		*	
* * * * * * * * * * * * * * * * * * *				AIED VER	17.4		* •		-		4		" •		4		*	
4TWT - *IN THE MSFC 14-IN*RATION		Ţ.	L C		τ. 		т Т		- -			,	, k				*	
4TWT - *IN THE MSFC 14-IN*RATION	CEC	_ 4.4	AL TABLES	TTOATTON	. 41/	THICLE E CONETC	INTO F	SCHEDUING TH	E +=	OBOE .	*^ ^^	, , , , ,	MCEC	1	*E (	ALLEN/DI	*DMC-	DD-2174
94										UKCE			_		_		-	
## A33 *NE THE STATIC STA*				<b>.</b>		ATION												
R-141,811*BILITY CHARACTERI*  *ICLE 5 CONFIGURAT*  *STICS OF THE 0.00*  *ION; TO DETERMINE*  **4-SCALE MODEL (74*  *THE EFFECT ON TH *  *E VEHICLE 5 AEROD*  **LE VEHICLE 5 CONF*  *YNAMIC CHARACTERI*  **IGURATION (1A33) *  *STICS OF ET AND S*  *  **RB NOSE SHAPE, SRB*  *  *NOZZLE SHROUD FL *  **NOZZLE SHROUD FL *  **ARE ANGLE, ORBITE*  ***  **ARE ANGLE, ORBITE*  ***  **AND STING LOCAT*  ***  ***  ***  ***  ***  ***  ***											*4.90						*140.4	, , , , , ,
*STICS OF THE 0.00*											- A		TO WIND	IOMACI	- * - Di	113	*	
*4-SCALE MODEL (74*	K-141,										.i.		<del>,</del>		·		*	
*-OTS) SPACE SHUTT*  *E VEHICLE 5 AEROD*  *YNAMIC CHARACTERI*  *STIGURATION (1A33) *  *STICS OF ET AND S*  **  **  **  **  **  **  **  **  **					•						*		•		•		J.	
*LE VÉHICLE 5 CONF*  *YNAMIC CHARACTERI*  * * * * * * * * * * * * * * * * * *											*	,			*		τ •	
*IGURATION (1A33) *											*	•	T.				<b>T</b>	
*											*		r.		**		<b>~</b>	
		*1	GURATID	N (1833)	*						*		T.				-T	_
		*			*						*		*		*		- T	묶
		*			*						*	,	•		*		*	••
		*			*						*	,	*		*		*	<b>"</b> U
		*			*						*		*		*		*	Q
		*			*				AT*		*		*		*		*	Ç
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		*			*		*		*		*	1	*		*		*	_
																		3
* * * * * * * QU																		

		WIND TUNNEL TEST	/ DMS DATA	PROCESSING	ì		175
* TEST * ID * REPORT TITLE	* CONFIGURATIONS * TESTED	* 5 * TEST  * PURPOSE	* + TYPE OF * TEST		* .E* TESTING :E* AGENCY	* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
MSFC - *AN INVESTIGATION MATHT - *IN THE MSFC 14-I S94	N*RATION	*STATIC STABILIT* *CHARACTERISTICS *F THE SHUTTLE V *ICLE 5 CONFIGUR. *ION; TO DETERMIN *THE EFFECT ON TI *E VEHICLE 5 AER *YNAMIC CHARACTE *STICS OF THE ET *ND SRB NOSE SHA *, SRB NOZZLE SHA *, SRB NOZZLE SHA *UD FLARE ANGLE, *RBITER TO TANK *IRING, AND STIN *LOCATION *	**************************************	*0 G - *4 96 * * * * * * * * * * * * * *	*MSFC / *MSFC - *14-INCH TRIS *IC WIND TUNN *  *  *  *  *  *  *  *  *  *  *  *  *	ON*R B. LOWE EL*-DMS  *  *  *  *  *  *  *  *  *  *  *  *  *	*DMS-DR-2174 *VOLUME O2 *NOV , 1975 *  *  *  *  *  *  *  *  *  *  *  *  *

	·			<b></b>			<b>.</b>	VIND TUNNEL TES	ST /	DMS DATA	PROCES	SSING						176
TEST		* * *	REPORT T	TLE	* *	CONFIGURATION TESTED	NS *		*	TYPE OF		SCALE	* * TESI * AGEN		* *	COGNIZANT TEST DMS PERSONNEL	* BAS *PUBLIC *OR COM	ATIONS
RLAD WT 12 170	431	**************************************	ONIC HINGE AND WING /TORSION /HARACTERIS R THE -140 EGRATED SF TTLE VEHIC IA70) VOLU 3 UBSONIC AND WING /TORSION HARACTERIS R THE -140 EGRATED SF TTLE VEHIC IA70) VOLU	E MOME BENDI STICS DA/B I PACE S CLE JME 1 JD TRA E MOME BENDI STICS DA/B I	N*II N*LI ******************************	NTEGRATED VEH E DDEL 49-0 + 6 NTEGRATED VEH	77TS*	OBTAIN ORBITEFING BENDING LOWAND TO DEFINE VON AND BODY FOR THE STATE OF THE STATE	ADS *F ELE* FLAP* WHI* INT* SURA* * * * * * * * * * * * * * * * * * *	PRESSURE	+0 90 *1 50 * * * * * * * *	15 /	+C WINE * * * * * * * * * *NRLAD *7-FOOT	TUNNEL	*MEN [*D *-DM * * * * * * * * * * * * *	HUGHES,R C. NELL /R.I E POUCHER	*VOLUME *DEC * * * * * * *	01 1974 -2175 02
RLAD FWT 32 370 R-134,	- / 433	*50 *T *G/ *CH *OF *TE	ONIC HINGE AND WING /TORSION HARACTERIS R THE -140 EGRATED SP ITLE VEHIC IA70) VOLU	MOME BENDII TICS A/B II ACE SI	N*IN N*LE * F* N* H*	ITEGRATED VEH:	IC * * * * *	OBTAIN ORBITER NG BENDING LOA AND TO DEFINE VON AND BODY F HINGE MOMENTS LE IN THE SSV EGRATED CONFIG	DS *F ELE* 'LAP* WHI* INT*	FORCE PRESSURE	* 0 0 *0 90 *1 50 * * * * * * *	-		TRISON.	*MEN [*D		* * DMS-DR * VOLUME * DEC , * * * * * * *	

7	177	<b>_</b>					ING	PROCES	DMS DATA	ST /	WIND TUNNEL TES				
	SIC	* 5	OGNIZANT	* (				*MODEL		*	*		*		
ŝ	CATIONS	*PUBL	ST DMS		1G	TESTI			TYPE OF	*	* TEST	CONFIGURATIONS	*	°.	TES
	MMENTS	*OR C	ERSONNEL	*		AGENCY			TEST	*	* PURPOSE		REPORT TITLE *	-	ID
•															
	R-2176	N*DMS-	SCALLION/	*W. I	/	LARC	. ,	* 19 0	ORCE	EFF*F	*DETERMINE THE	139B DRBITER	PACE SHUTTLE ORB*	- +	ARC
3	1978	*MAY,		*ASA I		LARC		* 21 6			*ECT OF SEVERAL		TER TRIMMED CENT*		2HT
		*	MCDONALD	1+G. G	HELIUM	22-INCH	×	*		ILL*	*REBODY, WING-F		R OF GRAVITY EXT*	/*	26
		*		*-DMS		TUNNEL	+	*			*ET, AND CANARD		NSION STUDY VOLU*		A40
		*		*			•	*		¹ TH∗	*DIFICATIONS ON		E IV - EFFECTS O*		M-X
		*		*			,	*		*UTI	*E ORBITER LONG		CONFIGURATION M*		72661
		*		+			,	+		F P*	*DINAL CENTER O		DIFICATIONS ON T+		
		*		*			,	*			*RESSURE LOCATI		E AERODYNAMICS O*		
		*		*			•	*		*	* ,		THE 139B DRBITE*	*	
		*		*			•	*		*	*		AT MACH 20 3 *	+	
		*		*			,	*		*	*		*	*	
			NICHOLS/RI		/	RI	5 / '	* 0.01	ORCE	IN*F	E+TO INVESTIGATE	140A/B SSV ORBITE	ESULTS OF INVEST*	- +	RC
į	1, 1975	*MARC	POLEK/ARC		-	ARC	• ,	* 5.3	RESSURE	ACE*P	*CREMENTAL SURF		GATIONS ON AN O *		SHWT
		*	LOWE	₹*R B	HYPER	3 5-F001	,	* 10.3			*PRESSURE EFFEC		15-SCALE CONFIGU*		94
		*		√×-DMS	IND TUN	SONIC W	,	*		NG *	*OF RCS PITCH E		ATION 140A/B SPA*		E8A
		*		*		NEL	,	*		*	*INE OPERATION		E SHUTTLE VEHICL*		R-141
		*		*			4	*		*	*		ORBITER REACTIO*		
		*		*			*	*		*	*		CONTROL SYSTEM *		
		*		*				*		*	*		LUME-IMPINGEMENT*		
		*		*			,	*		+	*		ODEL 36-0 IN TH *		
		*		*			,	*		+	*		NASA/AMES RESEA*		
		*		*			>	*		+	*		CH CENTER 3 5-FO*		
		*		*			>	*		*	*		T HYPERSONIC WIN*		
		*		*			,	*		*	*		TUNNEL (DA83) *		
		*		*			,	*		*	*		*	*	
	R-2178	/*DMS-	E NICHOLS	*MARK	1	ARC	/ /	* 0 03	DRCE	ST *F	+THE PRIMARY TE	140A/B	NVESTIGATIONS ON*	- 4	RC
ţ	ST, 1974	*AUGL		*RI	-	ARC	- ,	*16			*CBJECTIVES ARE		N 0 030-SCALE S *		7SWT
		*	MANN	)*M. M∗	3Y 7-FC	9-FOOT E	,	*2 0		JRA *	*OBTAIN CONFIGU		ACE SHUTTLE VEHI*		47
		*		*-DMS	RSONIC	OT SUPER	,	*		*	*TION 140A/B		LE CONFIGURATION*		A53B
		*		J*	INEL (L	WIND TU	,	*		CON*	*STABILITY AND		40A/B DRBITER MO*		
		*		*		NITARY)	,	*		*TST	*TROL CHARACTER		EL IN THE AMES R*		
		*		*			,	*			*ICS, CONTROL S		SEARCH CENTER 9-*		
		*		*			,	*			*ACE EFFECTIVEN		Y 7-FOOT SUPER- *		
		*		*			,	*			*CONTROL SURFAC		ONIC WIND TUNNEL*		
		*		*			,	*			*INGE MOMENTS.		OA53B) *		
		*		*			•	*			*VERTICAL TAIL		*	4	
		*		*			,	*		*	*NEL LOADS		*	, *	
		*		*				*							

<b></b>						WIN	TUNNEL TEST	/	DMS DATA	PROCES	SSING						178
		*		*		*		*		*MODE!	 L *		*		COGNIZANT	* BAS	TC
TEST	*	k		*	CONFIGURATIONS	*	TEST	*	TYPE OF			TESTIN	√4 ×		TEST DMS	*PUBLIC	
ID	*	REPO	RT TITLE	*	TESTED	*	PURPOSE					AGENC			PERSONNEL	*OR COM	
RC	~ ,	*RESULT	S OF AN 1	NV*S	S ORBITER LOWER	***	INVESTIGATE	 ro*s	TD110T-DVA	J++ O	/ +,	ADC	/	 n t	KINGSLAND	/B*DMC_DD	-0470
1TWT	_ ,	FESTIGA	TION OF T	HF*W	ING CARRY-THROUG	3*6.	THE SENSITIVE	17*	ITROCI-DIT	*0 60	-	ARC	*		KINGSLAND	*NOV ,	197
05	1.	*ACOUST	IC AND VI	B +H	STRUCTURE WITH	*Y '	TO EXTREME PR	÷2+		* 2 !			TRANSO*		3 LOWE	*	191
7SWT	٠,	RATION	AL ENVIRO	NM*A	DUMMY PANEL . A	A # S I 11	OF GRADIENTS	\N:*			-		TUNNE*			*	
SBA/B	,	*ENT OF	A FULL S	CA*R	IGID PANEL, OR	1 *D 1	TERATION AND	T*				L (UNITA			,	*	
	378×	LE SPA	CE SHUTTL	E *N	ELASTIC PANEL	*n 1	DEFINE THE TO	*20		*			3Y 7-FO*				
			R STRUCTU		eenotivo tance		RODYNAMIC ENV						RSONIC *			**	
			PANEL WI				MENT						NNET (N*			•	
			TED TPS I			*	TIGITY .	*		*		WIND TO	* UNCL (U			*	
			ES UNITAR			*		*		*	•	VI I MINI )				*	
			IND TUNNE	•		*		*		*	*		*			*	
			81-0.TES	-		*		*		*						*	
		OSBA A		. *		*		*		*	•					**	
		,		*		*		*		*						**	
RC	- 4	HEAT T	RANSFER T	ES*S	SV ORBITER (MODE	*nr	TATN AFRONYNAM	#T *}-	IFAT-TDAMS	 * 5 2	)	ARC	- *	.1 1	CUMMINGS,	T*nMc=np	-2180
3.5HWT			4 0 006-S				HEATING DATA L		ica i inaite	* 5 30					FOSTER/RI	*VOLUME	
195					SV EXT TANK (MO					*	-				C LOCKMAN/A		
H28	я	MOCOUP	LE SPACE	SH+D			N-TO-LAUNCH-SI			*		VEL		m 7	•	*	15/1
R-147.			MODEL (50				BORT CONDITION				*			-	3 LOWE		
			IN THE NA			*5	ADDKI COMPTIT	**		<i>-</i>				-DMS		•	
			RESEARCH			*					· •			- 01413	,	*	
			5-FOOT H			<u></u>		Ţ		<b>.</b>	4		*			<b>.</b>	
			UT GNIW S			٠ -		Ţ.		*	T		*			*	
			MACH 5.3			τ. 		<u>.</u>		*	*		*			*	
		H-28)	MACH 5.3	(1,		*				*	*		**			*	
		,		- T		- T		- <del></del>		*	*		*			*	
RC			DANISEED T	 	SV ORBITER (MODE	a¥ Estandori	FATSI ACDODVALAR	* ** **	EAT-TOAME	* = 0	*	. 50	*		d OTTAMANOC	*	0.400
			V 0 006-S						EAT - I KANS	* 5 30		ARC			CUMMINGS,		_
195	/4	I E TUTI	MERLIN TH	CDAC	SV EXT. TANK (MO	101	HEATING DATA L	11/1 v			-				. FOSTER/RI		
H28			LE SPACE							*		-			K. LOCKMAN/A	KC*2EFI.,	19/6
			MODEL (50		EL 41-1)		N-TO-LAUNCH-SI	• •		*		NEL			A. SARVER	*	
, , , , , , , , , , , , , , , , , , ,			IN THE NA				ABORT CONDITIO	JN.*		*	*				3 LOWE	*	
			IN THE NA RESEARCH			*\$		*		र 	*		*	-DMS	>	* 	
						*		*		*	*		*			*	
			.5-FOOT H			* .t.		٠.		*	*		*			*	
	7	CKOOMI	C WIND TU	WIN *		ж		*		*	*		*			*	
		- LI AT 1	AADLI E O	f + 4.													
		EL AT ( H-28)	MACH 5 3	(1+		*		*		*	*		*			. *	

******		WIND TUNNEL TEST /	DMS DATA	PROCESSING	,		17	'9
	* *	<del>-</del>	* ·	*MODEL	*	* COGNIZANT	* BASIC	-
TEST	* * CONFIGURATIONS	* TEST	* TYPE OF	* SCALE	* TESTING	* TEST DMS	*PUBLICATION	ıs
ID	* REPORT TITLE * TESTED	* PURPOSE	* TEST	*MACH RANGE	+ AGENCY	* PERSONNEL	*OR COMMENTS	;
ARC	- *A HYPERSONIC FORC*EXTERNAL TANK	*TO INVESTIGATE TH		* 0 006 /		*PAUL RAMSEY/NASA		
3.5HWT	- *E AND MOMENT TEST*	*E EFFECTS OF PROT				*TOMMY DAVIS/ NSI	*NOV , 197	4
196	/*DF A O OO6 SCALE *	*UBERANCES AND REY	<b>(+</b>		*3 5-FOOT HYPER		*	
TA9F	*MODEL OF THE *	*NOLDS NUMBER ON	+	*	*SONIC WIND TUN		*	
CR-134.	425*330.2 INCH DIAMET*	*THE FORCE AND MON	1*	*	*NEL	*-DMS	*	
	*ER EXTERNAL TANK *	*ENT COEFFICIENTS	*	*	*	*	*	
	*IN THE AMES RESEA*	*	*	+	*	*	*	
	*RCH CENTER 3 5 *	*	+	*	*	*	*	
	*FT. HYPERSONIC WI*	*	*	*	*	*	*	
	*ND TUNNEL (TA9F) *	*	*	*	*	*	*	
	* *	*	*	*	*	*	*	
LARC	- *SUPERSONIC CONTRO+089B/139	*	*FORCE	* 0165 /	*LARC /	*BERNARD SPENCER,		
UPWT	- *L EFFECTIVENESS F+	*	*	*25 -	*LARC -	*JR./LARC	*APRIL, 197	7
1101	/*OR FULL AND PARTI*	*	*	+4.63	*UNITARY PLAN W	/∗J. E VAUGHN	*	
LA19	*AL SPAN ELEVON CO*	+	*	*	*IND TUNNEL	*-DMS	*	
_	062+NFIGURATIONS ON A*	*	*	*	*	*	*	
010 101,	* 0.0165 SCALE MD *	*	*	*	+	*	*	
	*DEL SPACE SHUTTLE*	*	*	*	*	*	*	
	*ORBITER TESTED I *	*	*	*	+	*	*	
	*N THE LARC UNITAR*	*	*	*	*	+	*	
	*Y PLAN WIND TUNNE*	*	*	*	*	*	*	
	*[ *	+	*	*	*	*	*	
	* L	*	*	*	*	*	*	
1 400	- +SPACE SHUTTLE ORB*140A/B	*TO DETERMINE EFFE	*EUDCE	*0 01 /	*LARC /	*W P. PHILLIPS	*DMS-DR-2183	3
LARC 8TPT	- *ITER TRIMMED CENT+	*CTS OF FUSELAGE N		* 35 -	*LARC -	*J W. BALL	*FEB., 197	17
	=	*OSE AND WING FILL			*8-FOOT TRANSON		*	
684	/*ER-OF-GRAVITY EXT*	*ET MODS ON TRANSC			*IC PRESSURE TU		*	
LA51	*ENSION STUDY VOL*	*NIC AERO. CHARACT		*	*NNEL	*	*	_
TM-X	*UME II-EFFECTS OF*	*RIC AERO. CHARACT		-7 -¥-	* 14146.6	*	*	9
72661	*CONFIGURATION MO *	*CONFIG	, ·	•	*	*	*	শ
	*DIFICATIONS ON TH*	1 CONFIG	T	-7° •₩	*	*	*	℧
	*E AERODYNAMIC CHA*		·	•	*	*	*	ŎOR
	*RACTERISTICS OF T*	T	T.	1°	•	*	*	Ō
	*HE 140A/B ORBITER*	<b>本</b>	# _	+ -		· *		70
	*AT TRANSONIC SP *	न 		4.		*	*	^
	*EEDS *	**	₹	<b>不</b>	.4.	···	•	5
	*	*	*	₹	Ψ.	7	•••	

ORIGINAL PAGE IS

							T DNIW	UNNEL TE	ST /	DMS D	ATA	PROCES	SING					18
		*		*			*		*			*MODEL	k	*	*	COGNI ZANT	*	BASIC
TEST		* _		+		GURATIONS		TEST	*	TYPE				* TESTING	*	TEST DMS		BLICATION
ID		* R	EPORT TITLE	*	TI	ESTED	* 	PURPOSE	* 	TES	r 	*MACH	RANGE 1	AGENCY	* 	PERSONNEL	+U+ 	COMMENTS
ARC			NSONIC CONT		89B/14			TERMINE		ORCE		*0 016				RNARD SPENCER		
TPT			ECTIVENESS					NAL/LATE				* 60		LARC -		/LARC	*Д	PRIL, 197
30			ULL AND PAR					OL EFFEC				*1 08				E. VAUGHN	*	
148		_	PAN ELEVON					ON COMBI				*				J FRICKEN	**	
<b>(-151,</b>	061		GURATIONS OF					F INBOAR	•			*		+NNEL	*-D	MS	**	
			165 SCALE M					RD, FULL				*	X	<b>*</b>	*		*	
		_	SPACE SHUTT					G TRAILI	NG E*			*	×	* 	*		**	
			ITER TESTED				*DGE U	ONTROLS	*			<b>₹</b> 	7	<b>7</b> 1.	*		*	
			: LARC 8-FOO' ISONIC PRESSI				*		*			<b>本</b> 止	7	* -			<b>-</b>	
		*TUN	-	UKE*			* *		*			<i>₹</i>	7	<del>т</del> _			<b>.</b>	
		* 1014	MEC	*			*					* *	4	T J	*		*	
₹C	_		ESTIGATIONS	DN + 1	401/R		*THE P	RIMARY T	FST *1	ORCE		* 0.03	/ .	· +ARC /	*MA	RK E NICHOLS	/*D	MS-DR-2185
SWT			O OSO-SCALE		70147 D			TIVES AR		DIVOL		* 0.00 *2 5		*ARC -	*RI			EPT , 197
17			E SHUTTLE VI					N CONFIG				*3 5		*8-FOOT BY			*	_,,,
530			CONFIGURAT					140A/B	*			*		OT SUPERS			*	
			A/B ORBITER					LITY AND	CDN*			+		*WIND TUNN			*	
			IN THE AME					CHARACTE				*		*NITARY)	*		*	
			ARCH CENTER					CONTROL				*	•	+	*		*	
		*ITA	RY PLAN 8-B'	Y *			*ACE E	FFECTIVE	NESS*			+	5	*	*		*	
		*7-F	DOT SUPERSO	NIC*			*CONTR	OL SURFA	CE H*			*	1	*	*		*	
		*WIN	D TUNNEL	*			*INGE	MOMENTS,	AND*			*	,	*	*		*	
		*		*			*VERTI	CAL TAIL	PA *			*	,	*	*		*	
		*		*			*NEL L	.OADS	*			*	,	*	*		*	
		*		*			*		*			*	ż	*	*		*	
RC			ULTS OF DIF							FORCE		*0 015	•	*LARC /		I LINDSEY,M.		
ΓPΤ			IAL ELEVON/									*0 35		*LARC -		LAM/RI		AN , 197
36			N DEFLECTION									*12				H LINDAHL	*	
1116			LATERAL CON					CONTROL				*		*IC PRESSU	RE TU*-D	MS	*	
₹-134,	428		PTIMIZATION					ION, TRAN				*		*NNEL	*		*	
			LEVON HINGE					VON HING				*	•	<b>*</b>	*		*	
			IT INVESTIGATION					,TRANSON				*	`	*	*		*	
			ON AN O 015					S OF NEW				*	,	<del>7</del> 1⊾	ж •		*	
			MODEL(49-0	•				6-INCH				,	,	σ •	*		*	
			HE SPACE SH ORBITER IN					EVON AND				*	,	~ •	*		*	
			A/LANGLEY R					USELAGE TRANSONI				*		 	*		*	
			CH CENTER 8				•	OF THE				*	,	*	*		*	
			TRANSONIC P					(VL70-00				*	,	*	*		*	
			E TUNNEL	*			*) OMS		*			*		*	*		*	
		*	- TOTALL	*			*	, , 553	·т ж			*	,	*	*		*	
												•						

			W	IND TUNN	EL TEST /	DMS	DATA	PROCE	SSING								181
	*	*	*			 +		*MODE!	 L	*		*	(	COGNIZANT	*	BASI	C
TEST	*	* co	NFIGURATIONS *	TI	EST '	* TY	PE OF			* TES	TING	*	TE	EST DMS	*	PUBLICA	TIONS
ID	* REPORT		TESTED *		_	* T	EST	*MACH	RANGE	* AGE	NCY	*		PERSONNEL	*	OR COMM	ENTS
			/m			· Fopo	-		05 /	D.T	,		р с	MENNELL	/DT *1	nwe_np_	2197
NRLAD			B SPACE SHUT				E	*0.04		≁KI *NRLAD				. LOWE		NOV .	
LSWT	- *LEVUN GAP	SEALING*ILE	ORBITER INNER*	RLEVUN EI	THE MEN	<del>*</del>		*0 26		+LOW S					*	,	, , ,
726	/*FLAPPER D	UURS UN *MULD	LINE CONFIG *	G TNOU EI	I THE NEW	r •		*0 20		*TUNNE		*	UNIS		*		
OA 119A			ION, (MODEL 1*		NG FLAPPE			*		*	_	*			*		
CR-134,	421*FFECTIVEN *19A)	ESS (UAI*6-0)		R DOORS	NG PEAFFE	*		*		*		*			*		
	* 19A / *	* *	· ·	K DOOKS	,	*		*		*		*			*		
LARC	*	· ·			,	*FORC	E	*		*LARC	1	*	DB.	WATSON	*	DMS-DR-	2188
UPWT	- *		· · · · · · · · · · · · · · · · · · ·		,	*	_	*		+LARC	_		-DMS		*	TO LRC	
1075	- <i>1</i> /*	<i>*</i> r	*		,	*		*		*UNITA	RY PL				*		
LA39	/	±-	*		:	*		*		*IND T					*		
LASS	*		*		3	*		*		*		*			*		
ARC	- *PFSIIITS O	F INVEST*ORBI	TFR 1404/B *	TO INVEST	TIGATE OR	*FORC	E	*1.5	-	*ARC	/	*	E. CH	HEE/ROCKWE	LL *I	DMS-DR-	2189
97SWT	- +IGATION I				NG BENDIN		_	*2 5		*ARC	_	*	м м	MANN	*	MARCH,	1975
052	/+A 0 015-S				V PANEL L			*		*9-F00	T BY	7-F0*	-DMS		*		
IA110	*EGRATED C				ELEVON :			*		∗oτ su	PERSO	NIC *			*		
	506*TION OF T			EFFECTIVI		*		*		*WIND	TUNNE	L (U*			*		
011	*SHUTTLE V		*		,	*		*		*NITAR	Y)	*			*		
	*IN THE AR		*		3	*		*		*		*			*		
	*PERSONIC		*		;	*		*		*		*			*		
	*TUNNEL US		*		,	*		*		*		*			*		
	*LS 67-TS		*		:	*		*		*		*			*		
	*	*	*		3	*		*		*		*			*		
MSFC	- *INVESTIGA	TION IN *0 OC	4-SCALE ORBIT*	TO VERIF	Y STABILI	*FORC	E	* 0 0		*NASA	/			ALLEN /			
14TWT			ORCE MODEL (7*					*O 6		*MSFC	-		R. H	LINDAHL	*	JUNE,	1975
599		STATIC *4-0)		ARACTERI:		*		* 4 9		*14-IN			-DMS		*		
0A108	*STABILITY	AND CON*	*		3	*		*		*IC MI	ND TU	INNEL.*			*		
CR-141,	537*TROL EFFE	CTIVENES*	*		;	*		*		*		*			*		
	*S OF THE		*		;	*		*		*		*			*		
	*ALE MODEL	(74-0) *	*		:	*		*		*		*			*		
	*OF THE SH	UTTLE 5 *	*		3	*		*		*		*			*		
	*ORBITER (	0A-108) *	*		,	*		*		*		*			*		
	*	*	*		:	*		+		*		*			*		

			<b></b>		WIND	TUNNEL TE	ST /	DMS DATA	PROCES	SSING						182
	*		*		*		*		*MODEL		*		*	COGNIZANT	* BAS	TC
TEST	*		*	CONFIGURATIONS	*	TEST	+	TYPE OF				TESTING	*	TEST DMS	*PUBLIC	
ID	*	REPORT TITL	E *	TESTED	*	PURPOSE	*					AGENCY	*	PERSONNEL	*OR COM	_
ARC	- *S	PACE SHUTTLE	ORB*1	40A/B	+C. 6	EXTENSI	ON S*	FORCE	* 0 01	. /	+LA	RC /	*Þ	T. BERNOT/NA	SA*DMS-DD	-2191
HT	- *I	TER TRIMMED	CENT*		*TUDY	AT MACH	10 *		*10 3		*LA		*/L/		*JULY.	
04	/+E	R OF GRAVITY	EXT*		*		*		*10 3			NTINUOUS-FL			*	1373
A47	+ E	NSION STUDY	V0*		*		*		*					G. MCDONALD	*	
M-X	*[_	UME 1EFFEC	TS 0*		*		*		*		*UN		*-D!		*	
72661	*F	CONFIGURATION	ONS *		*		*		*		*		*	•••	*	
	*0	N THE AERODY	NAMI *		*		*		*		*		*		*	
	*C	CHARACTERIS	TICS*		*		*		+		*		*		 1	
	*0	F THE 140 A/I	B O *		*		*		*		*		*		*	
	*R	BITER AT MAC	H 10*		*		*		*		*		*		**	
	*	3	*		*		*		*		*		*		*	
	*		*		*		*		*		*		*		*	
EDC	- +A	ERODYNAMIC RE	ESUL*0	/ET, 0/ET,SRB; 9	S*STAT	IC FORCE 1	FST*	FORCE	*0.010	1	*RI	,	*.11	H CAMPBELL.	C*DMS-DB	-2102
WTA	- *T	S OF A SEPARA	ATIO+R	В		RB SEPARAT			*4 52		*AEI	•		L KNUDSEN. P		
AC	/*N	EFFECTS TEST	F (I*			FECTS FOR			*4 52					PEARSON/R I	*JULY.	
487	* A	87) ON A O O	1-SC*			OF SSV AT			*					BERT BURT/ARO		1373
R-141,!	541*A	LE MODEL (52	-OTS*		*UDES		*		*		*	TORNEL (M)		A SARVER	·	
		OF THE INTE			*		*		*					B WATSON	*	
	* E	D SSV IN THE	AED*		*		*		*		*		*-DI			
	*C	/VKF 40-BY-40	NI C		*		*		*		ų.		*	113		
	*C	H SUPERSONIC	WIN*		*		*		*				•		•	
		TUNNEL A	*		*		*		*		 		т ъ		- -	
	*		*		*		*		*		*		*		τ •	
EDC	~ *A	ERODYNAMIC RE	ESUL*0	/ET; O/ET,SRB, S	*STAT	TO FORCE 1	FST*	EUBUE	*0.010	1	*RI	,		H. CAMPBELL,	C+DMC-DD	-2102
ATA	- *T	S OF A SEPARA	ATIO*R	B		RB SEPARAT			*4.52		*AEI			L KNUDSEN. P		
DA		EFFECTS TEST		_		FECTS FOR			*4.52					PEARSON/R I.	*JULY.	1975
487	-	87) ON A O O				OF SSV AT			*			TUNNEL (A)		BERT BURT/ARO		1975
₹-141.		LE MODEL (52			*UDES		*		*		* U	I DIMNEE (A)		A. SARVER	T	
•		OF THE INTE			*		*		*		*			B WATSON	*	
		D SSV IN THE			*		r ±		*		•		*~D!		*	
		/VKF 40-BY-40			*		- T		T.		-* 		*~U	AID.	#	
		H SUPERSONIC			 •		- T		T -		ж т		*			
		TUNNEL A	*		-, -		# _		T		*		* *		*	
							*		•		4		不		*	

<b></b>					WIND	TUNNEL TEST	1	DMS DATA	PROCES	SSING						183
	*		*		*		*		*MODEL	-	*	*	COGNIZANT	*	BASIC	
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	+	TEST DMS	*PUB	LICATIO	JNS
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	+ AGENCY	+	PERSONNEL	*0R	COMMENT	'S
3		RESULTS OF HEAT						EAT-TRANS					H DYE/RI		-DR-219	
		RANSFER TEST OF		. (MODIFIED 22-0					* 7 32		*ARC -		E VAUGHN	*OCT	, 19	977
3		O 0175-SCALE SPA				UNDER SIMU			* 7 32	-	*3 5-FOOT HY			*		
6		CE SHUTTLE ORBIT				ENTRY CONDI	TI*		*		*SONIC WIND	וט-*אטד	MS	*		
151,3		R 140B MODEL (MO			*ONS		*		*		*NEL	*		*		
	*	IFIED 22-0) IN T	H*		*		*		*		*	*		*		
	*	E NASA-AMES RESE	Α*		*		*		*		*	*		*		
	*	RCH CENTER 3 5-F	0*		*		*		*		*	*		*		
	*	OT HYPERSONIC WI	N*		*		*		*		*	*		*		
	*	D TUNNEL	*		*		*		*		*	*		*		
	*		*		*		*		*		*	*		*		
;	- *	RESULTS OF A PRE	S*L	AUNCH VEHICLE 5	*T0 0	BTAIN PRESS	UR*P	RESSURE	*0 03	/	*ROCKWELL/		J. DZIUBALA,			14
WT	- *	SURE LOADS INVES	T+		*E D1	STRIBUTIONS	, *F	ORCE	*O 9	-	+ARC -	* (	CHEE, M. D. MJ	L*VOL	UME O1	
	/*	IGATION ON A O O	3*		*FORG	E DATA, AND	н*		+14		*9-FOOT BY'7	7-FO+AM,	/RI	*N0V	', 19	17
1B		O-SCALE MODEL (4			*INGE	MOMENTS ON	<b>T</b> *		*		*OT SUPERSON	11C *D '	W HERSEY	*		
141.8	317*	-OTS) OF THE INT	E*		*HE I	NTEGRATED L	AU*		+		*WIND TUNNEL	_ (ប*G	W KLUG	*		
•		GRATED SPACE SHU			*NCH	VEHICLE	*		*		*NITARY)	*-DI	MS	*		
		TLE VEHICLE CONF			*		*		*		*	*		*		
		GURATION 5 IN TH			*		*		*		*	*		*		
		NASA AMES RESEAR			*		*		*		*	*		*		
		H CENTER 9 X 7 F			*		*		*		*	*		*		ļ
		OT LEG OF THE UN			*		*		*		*	*		*		
		TARY PLAN WIND T			*		*		*		*	*		*		
		NNEL (IA81B) VOL	_		•		*		*		*	*		*		
		ME 1 OF 5	.U.				*		*		*	*		*		
		ME   UP 5	-		T		*		*		*	*		*		ď
	- J.	RESULTS OF A PRE	C 4 1	AUNOU VEHICLE E	*TO (	RIAIN DDECC	HD∗D	DESCRIDE	*0 03	1	*ROCKWELL/	*T	J DZIUBALA,	F*DMS	-DR-219	14
w.				AUNCH VEHICLE 5		STRIBUTIONS			*0 9	,	*ARC -	* 1	CHEE, M D MI	L*VOL	UMF O2	ŕ
WT		SURE LOADS INVES				E DATA, AND	•	ORGE	*1.4		*9-FOOT BY 7			*DEC		
40	•	IGATION ON A O.O				MOMENTS ON			*		*OT SUPERSON			*	.,	
1B		O-SCALE MODEL (4							τ Ψ		*WIND TUNNEL			*		
141,		-OTS) OF THE INT				NTEGRATED L	AU*		т т		*NITARY)	_ (U+G. *-Di		*		
		GRATED SPACE SHU			*NCH	VEHICLE	*		T-		TINTIAKTY	r - D(	ni J			
		TLE VEHICLE CONF			*		*		т -		τ •	<u>.</u>		*		
		GURATION 5 IN TH			*		*		<u>-</u>		т њ	ı.		*		
		NASA AMES RESEAR			*		*		*		т 	<i>π</i>		- -		
		H CENTER 9 X 7 F			*		*		*		т 	# -		~ •		
		OT LEG OF THE UN			*		*		*		π 	<i>*</i>		- -		
		TARY PLAN WIND T			*		*		*		*	*		<b>π</b>		
		NNEL (IA81B) VOL	υ*		*		*		*		*	*		<b>本</b>		
	*	ME 2 OF 5	*		*		*		*		*	*		*		
	*		*		*		*		+		*	*		*		

				. =	WIND	TUNNEL TES	ST / DMS DAT	A PROCES	SSING				184
TEST ID	* * *	REPORT TITL	* * E *	CONFIGURATION TESTED	* 5 * *	TEST PURPOSE	*     * TYPE (     * TEST		SCALE	* TESTING	* COGNIZANT * TEST DMS * PERSONNEL	*PUBLIC	ATIONS
RC 7SWT 19 A81B	- **IO **IO **IO **T **NH **T **NH **T **NH **T **NH ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T ***T **T ***T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T **T	GURE LOADS IN GATION ON A D-SCALF MODEL OTS) OF THE GRATED SPACE LE VEHICLE C GURATION 5 IN IASA AMES RES I CENTER 9 X IT LEG OF THE ARY PLAN WIN NEL (IA818) E 3 OF 5  ESULTS OF A I URE LOADS IN GATION ON A C -SCALE MODEL OTS) OF THE TATED SPACE C URATION 5 IN	VEST*  * * * * * * * * * * * * * * * * * *	AUNCH VEHICLE !	*E DI *FORC *INGE I *HEH ** * * * * *** *** *** *** *** ***	STRIBUTION E DATA, AN MOMENTS O NTEGRATED VEHICLE	IS, *FORCE ID H* ID H* IN T* LAU*  *  *  *  *  *  *  *  *  *  *  *  *	*0 9 *1 4 * * * * * * * * * * * * * * * * * * *	-	*WIND TUNNEL *NITARY)  *  *  *  *  *  *  *  *  *  *  *  *ROCKWELL/ +ARC - *9-FOOT BY 7- *OT SUPERSONI	C *D.W HERSEY (U*G W. KLUG *-DMS * * * * * * * * * * * * * * * * * * *	MIL*VOLUME	03 1975 -2194
	*H	ASA AMES RESI CENTER 9 X T T LEG OF THE	7 FO* UNI*		* * *		* * *	* *	4 1	* * *	* * *	* * *	ç
	*N	ARY PLAN WINT NEL (IA81B) ( E 4 OF 5			* *		* *	* *	4 -	* *	* *	* * *	Or POOX
	•		*		*		**	*	*	ĸ	*	*	COMPLE

						WIND	TUNNEL TEST	. /	DMS DATA	PROCES	SSING					18
		*				*		+		+MODE(		*	<del></del>	COGNIZANT	* BASIC	<del>-</del>
TEST	r	*		*	CONFIGURATIONS	*	TEST	+	TYPE OF			* TESTING	*	TEST DMS	*PUBLICATI	NOI
ID		*	REPORT TITL	.E +		*	PURPOSE	*				* AGENCY	*	PERSONNEL	*OR COMMEN	٧TS
SC.	_	*RE	SULTS OF A	PRES*L	AUNCH VEHICLE 5	*TO	OBTAIN PRESS	UR*P	RESSURE	*0 03	1	*ROCKWELL/	*T	J. DZIUBALA,	E*DMS-DR-21	194
SWT			RE LOADS IN				ISTRIBUTIONS			*0 9		*ARC -	*	CHEE, M. D. M	IL*VOLUME 05	5
19			ATION ON A			+FOR	CE DATA, AND	H*		*14		+9-FOOT BY 7	-FO*AN	1/RI	*DEC., 1	197
.81B	-		SCALE MODEL				E MOMENTS ON			*		*OT SUPERSON	IÇ +D.	W.HERSEY	*	
			TS) OF THE				INTEGRATED L			*		*WIND TUNNEL	(U+G.	W. KLUG	*	
			ATED SPACE				VEHICLE	*		*		*NITARY)	`*-D	MS	*	
			E VEHICLE C	-		*		*		*		*	*		*	
			RATION 5 IN			*		*		*		+	*		*	
			SA AMES RES			*		*		*		*	*		*	
			CENTER 9 X			*		*		+		*	*		*	
			LEG OF THE			*		*		*		*	*		*	
		-	RY PLAN WIN			*		*		*		*	*		*	
			EL (IA81B)	-		*		*		*		*	*		*	
			5 OF 5	*		*		*		*		*	*		*	
		*	5 5. 5	*		*		*		*		*	*		*	
RC	_	*RF	SULTS OF TE	ST 0*0	RBITER CONFIG. 3	3*TO 1	DETERMINE RO	S *F	ORCE	* 0 0	10 /	*ROCKWELL/	*D	E THORNTON/	RI*DMS-DR-21	19
HT			2 IN THE NA				INTERACTION			+10 3	-	+LARC -	*M	M MANN	*FEB , 1	197
13			31-INCH CF				CTS ON HYPER			*10 3		*CONTINUOUS-	FLO*-D	MS	*	
82			AN 0 010-50				AERODYNAMIC			*		*W HYPERSONI	C T*		*	
			DEL(32-0) 0				RACTERISTICS			*		*UNNEL	*		*	
. , ,			SPACE SHUTT				TO INVESTIGA			*		+	*		*	
			FIGURATION				GAS CONSTAN			*		*	*		*	
			TERMINE RCS				ES TEMP )	*		*		*	*		*	
			T FLOW FIEL				LING EFFECTS	0*		*		*	*		*	
			RACTION AND				HE RCS SIMIL			*		*	*		*	
			VESTIGATE R			*UDE		*		+		*	*		*	
			GAS EFFECT			*		*		*		*	*		*	
		*	uno circor	*		*		*		*		+	*		*	
DC	_	+RF	SILLTS OF TH	WEST*D	RBITER 140A/B	*T0	DETERMINE EF	FE≯F	ORCE	+8 0	-	*ROCKWELL/	+ V	ESPARZA /ROC	KW*DMS-DR-21	196
/TB			ATIONS OF A		14214		OF SURFACE			*8.0		*AEDC -	*EL	L INTERNATION	AL*MAY, 1	197
A			5 SCALE SPA				ECTIONS ELEV			*		*HYPERSONIC 1	WIN*A	I. LINDAY /R	OC*	
79	,		TTLE VEHICL				UDDER, SPEED			*		*D TUNNEL (B	) *K\	ELL INTERNATI	ON*	
	531		OA/B CONFIG				KE, AND BODY			*		+	*AL		*	
, , , , ,	,		N WITH MODI				CONFIGURACI			*		*	*M.	M MANN	*	
			S PODS AND				MACH 8. ANGL	_		*		*	*-[	MS	*	
			NS IN THE A				ATTACK RANGE			*		*	*		*	
			F TUNNEL B				15D TO 45D.			*		*	*		*	
		+9)		*			NGLE OF SIDE			*		*	*		*	
		*		*			RANGE OF -50			*		*	*		*	
		 +		*		+0 5		*		*		+	*		*	
		•		т.		*	-	+	•	_					A.	

. <b></b>					WIND T	UNNEL TES	T / C	MS DATA	PROCE:	SSING						186
	+		*		*		*		+MODE!	L	*	*	COGNI ZAN	٠ *	BAS	IC
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*	PUBLICA	ATIONS
ID	*	REPORT TIT	LE *	TESTED		PURPOSE		TEST	+MACH	RANGE	* AGENCY	*	PERSONNE	*	OR COM	MENTS
			*													
VEDC				MODEL MCRO200									B. BREWER			
WTF		FLUX RESULT				HEATING			*16		*AEDC -	*C	D 114DEDM		DCT.,	19/4
/A291		THE SPACE				ET MATED			*19		*HYPERVELOCIT		K HABERM	AN, A*		
H10	_	E/EXTERNAL				ER UNDER			*		*WIND TUNNEL			*		
:R-134,		ANK INTERAC				FLOW CON	DIT*		*		*)	_	W SPARKS			
		EST AT MACH	-		*IONS		**		*		*		M MOSER	JR *		
		RS 16 AND 1	9 (FH*		*		*		*		*	*-D	MS	*		
		0)	*		*		*		*		*	*		*		
	*		*		*		*		*		*	*		* **	<b>D</b> 444 DD	
EDC				BITER 140A/B		MINE SUPE		IRCE	*2 O		*ROCKWELL/		ESPARZA		DMS-DR	
SWTA		N EFFECTIVE				IFFERENTI.			*5 O		*AEDC -		KWELL INTE	KNA I 1 *	JULY,	197
/1A	-	ATERAL CONT				N/AILERON			*		*SUPERSONIC W					
A115		MOTTAZIMIT				CONTROL	*		*		*D TUNNEL (A)		KWELL INTE			
:R-141,		LEVON HINGE				IZATION,			*		*	*UC *DN		KIVA I 1 *		
		IT INVESTIGA				IC ELEVON			* 		¥.		H. LINDAH			
	_	N A O 015-S				OMENTS, S			an.		* *	* - D		_ ~		
	-	PACE SHUTTL	_			C EFFECTS			*		ж .ь	∩	MO	- -		
		RBITER MODE A/B/C MODI				W BASELIN   ELEVON/E					•	-				
		N THE AEDC				D ELEVON/			т _		<b>*</b>	τ •		· ·		
	_	IND TUNNEL				GAPS, AN	-		т ш		* *			*		
		OA115)	A 7			SONIC EFF			T		Ψ.	*		**		
	- T	UA ( 13)	· ·			THE NEW S			*		т •	*		*		
						PODS.	nuk-		•		*	*		*		
	*				TE UNIO	F003.	*		*		*	*		*		
ARC	- 40	HIDEDSONIC D	VALAMI + OI	BITER, ET: SRB		TEDMINE D	VNIA *EC	DCE	+0.01	5 /	*LARC /	*P	P BOYDEN	D) *	DMS-DR	-2199
JPWT		STABILITY		•		TABILITY		NOE.	*2 0		*LARC -		FREEMAN.			
1074		TIVES OF TH				RISTICS A			*4 63		*UNITARY PLAN					
1093		E SHUTTLE L				ONIC SPEE			+		*IND TUNNEL	*AR		*		
.A43A/B		EHICLE	*		*	01110 01 66	*		*		*		W. BALL	*		
.A43B	*		*		*		*		*		*		H. LINDAH	<u> </u>		
M-X	*		*		*		*		*		*	*-D		*		
3315			*		*		*		*		*	*		*		

	*		*		*		*		*MODE	Ļ	<b>,</b>	+	COGNI	ZANT	* B	ASIC	
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*		MS		ICATION:	S
ID	*	REPORT TITL	€ *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE:	* AGENCY	*	PERSO	NNEL	*OR C	OMMENTS	
																	_
RC	- *5	SUBSONIC AND	TRAN+O	RBITER-140A/B, S	S*FORC	ED-OSCILLAT	IO*F	ORCE	*0.3	_ ,	*ROCKWELL/	*D.	C. FRE	EMAN,	JR*DMS-	DR-2200	
PT		ONIC DYNAMIC				STS; MEASUR			* 1 2		<b>—</b>					, 1976	5
77	/*E	SILITY CHARAC	TERI*	•	*WERE	PITCH, ROL	.L. *		*		×8-FOOT TR			ENPORT,	/L*		
444	*5	STICS OF THE	SPAC*		*, YA	W DAMPING,	NO*		*		⊦IC PRESSU				*		
M-X	*E	SHUTTLE LAU	NCH *		*RMAL	FORCE DUE	TO*		*	,	+NNEL	*J	W BAL	L.	*		
3336	*\	/EHICLE	*		*PITC	H RATE, CRO	)S *		*	,	k	+R.	H LIN	IDAHL	*		
	*		*		*\$ DEI	RIVATIVES,	<b>YA</b> *		*	3	k	*-DN	1S		*		
	*		*		*WING	MOMENT DUE	T*		*	,	k	*			*		
	*		*		*0 RD	LL RATE, RO	)LL*		*	3	+	*			*		
	*		*		*ING	MOMENT DUE	TO*		*	,	*	*			*		
	*		*		*YAW	RATE	*		*	,	*	*			*		
	*		*		*		*		*	,	k	*			*		
W	- *N	MATED CARRIER	AER*B	EING 747 CARRIE	E*TO PI	ROVIDE AERO	DY+F	ORCE	<b>*0 04</b>	/ `	⊁BOEING /					DR-2201	
SWT				(MODEL TE 1065)					*O 16	- ,	+UW	*NG	KB. B	UCANAN	/B*DEC	, 198	1
136	/*F	RISTICS INVES	TIGA*S	ORBITER (MODE)	L*TICS	FOR DEVELO	*MP		*O.16	3	+LOW SPEED				*		
<b>8</b> 4	*1	TION FOR 0 04	-SCA +43	3-0)	*ENT	OF THE 747	AI*		*	,	*TUNNEL		HANS	ON/BOE	IN*		
R-160.	854+L	E MODEL BOEI	NG 7*74	17 CARRIER/ET (M	M*RCRAI	FT FOR ORBI	TE*		*	,	*	*G			*		ORIGINAL OF POOR
	*4	7 CARRIER (M	ODEL*O	EL 1284-72)	*R FEI	RRY AND LAU	INC*		*	,	k		E. VAU		*		'' 🔏
	*1	E 1065)/SS 0	RBI *		*H , '	TO PROVIDE	TR*		*	•	k		R LUT	7	*		70 🔛
	*7	ER (MODEL 43	-0) *		*ADE	DATA FOR ST	'AB*		*	,	*	*-DN	45		*		o z
	*#	AND 747 CARRI	ER/E+		*ILIZ	ER SIZE AND	) <u>L</u> *		*	:	+	*			*		
	*1	(MODEL 1284	-72)*		*OCAT	ION EFFECTS	;, *		*	,	k	*			*		20 1
	*(	COMBINATIONS	IN *		*AND	TO PROVIDE	DR*		*	,	*	*			*		O TO
	<b>*</b> T	HE U. OF WAS	H. A*		*AG A	ND STABILIT	Y *		*	,	k	*			*		PAGE
	* E	RONAUTICAL L	ABOR*		*CHAR	ACTERISTICS	; F*		*	•	+	+			*		
	* <b>A</b>	TORY (UWAL)	F.K *		+OR TI	HE AIRPLANE	Δ*		*	,	+	*			*		La.3
	* K	CIRSTEN WIND	TUNN*		*ND E	XTERNAL TAN	ικ *		*	:	<b>*</b>	*			*		T m
	* E	L (CA3)	*		*CONF	IGURATION	*		*	,	*	*			*		< 03
	+	•- •	*		*		*		*	,	۲	*			*		

						WIND	TUNNEL TE	ST /	DMS DATA	PROCES	SSING		<b></b>				188
	*			*		*		*		*MODE!	+	*	*	COGNIZ	ANT *	BASIC	
TEST	*			*	CONFIGURATIO		TEST	*				TESTING	*	TEST DM		PUBLICATION	
ID	*	REPO	RT TITL	E *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE *	* AGENCY	*	PERSON	NEL *C	OR COMMEN	TS
_AD	- *	SPACE	SHUTTLE	VEH*1	140A/B OUTER M	OLD*TO D	DEFINE FER	RY C+	FORCE	*0 26	- +	*ROCKWELL/	*R	C MENN	ELL/RI *C	MS-DR-22	02
ΝT	- *	ICLE F	ERRY CO	NFIG*L	INE CONFIGURA	TI *ONF	GURATION	AFTE*		*0 26		NRLAD -		H. LIND		APRIL. 1	
1	/*	URATIO	N AFTER	BODY *C			Y FAIRING			*	*	LOW SPEED			*		
123			G EFFEC			*ECTS	ON ORBIT	ER S*		*	*	TUNNEL	*		*		
141.5			A/B ORB	-		*TAB]	LITY AND	CONT*		*	*	+	*		*		
			NAMIC C				CHARACTER			*	+	k	*		*		
			STICS U			*CS #	ND TO SUE	STAN*		+	*	+	*		*		
			05-SCAL				'E WIND TU			*	*	+	*		*		
			RBITER				JLTS OBTAI			*	*	*	*		*		
			THE ROCI				BOEING AER	OSP *		*	+	*	*		*		
			RNATION			*ACE	COMPANY	*		*	*	*	*		*		
			11 FT LO	_		*		*		*	*	k	*		*		
			IND TUN	VEL *		*		*		*	*	k	*		*		
	- A	(OA 123	,	*		*		*		*	+	<b>*</b>	*		*		
LAD	_ 4	DECILI T	C OF AN	# T \$13.7.1. 4	400 OUTER NO.	* D ( *TO *		*		*	*	* 	*		*		
					40C OUTER MOL				FORCE		-	*ROCKWELL/		T. HUGH	•	DMS-DR-22	-
5			NGE MOMI		NE CONFIGURAT	_				*0 20		*NRLAD ~		A SARV		APRIL, 1	975
119B			AL PANEI				ERON EFFE			*0 26		LOW SPEED			*		
			EFFECTIV				SS AND TO INDIVIDUA			*	*	*TUNNEL	*-D	M2	*		
141,5			NG AN				INDIVIDUA I PANEL HI			*		<del>*</del>	*		*		
		_	MODEL				NTS FOR T			<u>.</u>		r •	*		·		
			THE CON	•			NT 6 INC			<u>.</u>	-	r L	* *		Ť		
		. *	140C S	-			/ELEVON A			•		r L	Ť		Ψ Ψ		
			E ORBITI				N FUSELAG	-				T L	-T-				
			ROCKWE				ITH WING/			±			•		*		
			TIONAL N				SAP SEALIN			*			ī.		·		
			EED WIN				R DOORS	*		*	*	·· k	*		*		
			DA119B)			*	in books	*		*	*	k	*		*		
	*	•	-,,,,	*		*		*		*	*	· k	*		*		
RC	- *	RESULT	S OF TRA	ANSD*0	TS, 140A/B	*TO E	ETERMINE	FFFF*F	FORCE	*0.010	n / *	*ROCKWELL/	*M	T. PFTR	D771 M*E	MS-DR-22	Ω4
			ND TUNNI		, . , . , . , _		OF CONF.		5.100	*0.6	- ,	*LARC -			/ROCKWE*N		975
3	/*	ESTS O	N AN O.	*-010			EFFECTS			*12		8-FOOT TR			*		
43	*	SCALE	SPACE SE	-UTT*			BERANCES.			*		IC PRESSU			KEN *		
-141,5			ED VEHIC				TER FAIRI			*		*NNEL	*-Di		*		
			72-OTS				ATTACH ST			*		*	*		*		
	*	HE LAR	C 8-F00	T TP*			, ELEVON			*	*	*	*		*		
	*	T (IA4	3)	*			ON EFFECT			*	*	*	*		*		
	*	-		+			BENDING			*	*	+	*		*		
						ACAIT						•.			1-2		
	*			*		*ENT		*		<b>*</b>	*	*	*		'-		

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			WIND	TUNNEL TES	ST / DMS DA	TA PROCESSI	NG			189
	*	*	*		*	*MODEL	*	* COGN	IIZANT * B	ASIC
TEST	•	* CONET	GURATIONS *	TEST	* TYPE		ALE* TESTI	NG * TEST	DMS *PUBL	ICATIONS
ID	* REPORT TIT		ESTED *	PURPOSE	* TEST			Y * PERS	ONNEL *OR CO	DMMENTS
						<del>-</del>				
ARC -	*PESHITS OF A	O OO+RI SPAC	E SHUTTLE *TO	DETERMINE S	STAB*FORCE	*0 004	/ *ROCKWELI	L/ *P J. HA	WTHORNE/R*DMS-U	DR-2205
HT -	*4-SCALE 1400	MODINORRITER	VEHICLE 4*ILI	TY AND CONT	ROL+	*19 0 -	*LARC	- *I	*MAY,	1975
			ED) CONFI *CHA			*21 6	*22-INCH	HELIUM*D. A SA	RVER *	
109	*N SPACE SHUT		•		*	*	*TUNNEL	*R B LC	₩E *	
	2*EHICLE ORBIT				*	*	*	*-DMS	*	
, , , , , , , ,	+DEL (74-0) I		*		*	*	*	*	*	
	*NASA/LANGLEY		*		*	*	*	*	*	
	*EARCH CENTER		*		*	*	*	*	*	
	*RSONIC HELIU		+		*	*	*	*	*	
	+NEL (0A109)	*	*		*	*	*	*	*	
	*	*	*		*	*	*	*	*	
RC -	*RESULTS DE T	NVEST*0.010-S	CALE OUTER*TO	DBTAIN SIX-	-COM*FORCE	*.010	/ *LARC	/ *M T PE	TROZZI, M*DMS-E	DR-2206
			NE MODEL *PON			+1.60 -	*LARC	- +. D MIL	.AM/RI *MAY,	1975
			140A/B CON*MOM			<b>*4 63</b>	*UNITARY	PLAN W+R H. LI	NDAHL *	
44	*CONFIGURATIO			MATED VEHIC	CLE *	*	*IND TUN	NEL *-DMS	*	
	8*DEL 720TS) 0			SUBSONIC AN	√D T*	*	*	*	*	
	*ROCKWELL INT		≁RAN	SONIC CONDI	TIO*	*	*	*	*	
	*TIONAL SPACE		*NS:	EFFECTS OF	CON*	*	*	*	*	
	*TLE ORBITER	-	*FIG	URATION BUI	[LD-∗	*	*	*	*	
	*E NASA/LANGL		*UP:	EFFECTS OF	PRO*	*	*	*	*	^
	*SEARCH CENTE		+TUR	BERANCES, ET	r/or*	*	*	*	*	유
	*TARY PLAN WI		*BIT	ER FAIRINGS	S AN*	*	*	*	*	POO
	*NNEL (1A44)	*	*D A	TTACK STRUC	CTUR*	*	*	*	*	70
	*	*	*ES:	ELEVON DEFL	_ECT*	*	*	*	*	COX
	*	*	*ION	EFFECTS OF	√ WI*	*	*	*	*	<u>_</u>
	*	*	*NG	BENDING MON	4ENT*	*	*	*	*	_
	*	*	*		*	*	*	*	*	QUAL
										Ş
										,
										<u>.</u>
										=

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			WIND TUNNEL T	EST / DMS	DATA	PROCESS	ING						190
	* *		*	*		+MODEL	*			 *	COGNIZANT	* BAS	ic
TEST	Г *	CONFIGURATIONS	* TEST	* TYF	PE OF		SCALE*	TESTI	NG	*	TEST DMS	*PUBLIC	
ID			* PURPOSE					AGENC		*	PERSONNEL	*OR COM	
MSFC	- *AN INVESTIGATION *MO	DEL 467. SRR NO	*TO DETERMINE	THE *PRESS	SURF	*0 4 -		MSFC	/	*P	E RAMSEY/MS	FC*DMS-DB	-2207
HRWT	- *TO DETERMINE THE *SE				JU114	*0 6		MSFC	_	*V		*JULY	
033	/*PRESSURE DISTRIBU*RD					*		HIGH RE				*	
SA29F	*TION ON THE O.O13*DY		*E-SECTION OF			*		NUMBER				*	
CR-147	.608*7 SCALE SOLID ROC*		*146-INCH DIA			*		NNEL		*		*	
	*KET BOOSTER FOREB*		*	*		*	+			*		*	
	*ODY (MSFC MODEL 4*		*	*		*	*			*		*	
	*67) AT HIGH ANGLE*		*	**		• •k	•			*		*	
	*S OF ATTACK AT OR*		*	*		*	*			*		*	
	*NEAR 90 DEGREES *		*	*		*	*			*		*	
	*AND HIGH REYNOLDS*		*	*		*						*	
	*NUMBERS IN THE M *		*	*		*	*			*		*	
	*SFC HIGH REYNOLDS*		*	*		*	*			*		*	
	*NUMBER WIND TUNN *		*	*		*	*			*		*	
	*EL *		*	*		*	*			*		*	
	* *		*	*		*	· *	,		*		*	
MSFC	- *AN INVESTIGATION *MO	DEI NO. 470	*TO DETERMINE	THE *PRES	SURF	*0 0091	1 / 1	MSFC	1	*P	E. RAMSEY/MS	FC*DMS~DE	2-2208
14TWT	- +OF THE O 00915CAL*		*PRESSURE DIS		J-1.1C	*.6		MSFC	_		W WINKLER.	-	
609	/*E EXTERNAL TANK O*		*TION AROUND			*4 96		14-INCH	TRISO		DAVIS/NSI	*JAN	1976
TASF	*GIVE NOSE (MSFC M*		*OSE CAP	*		*					W. SPARKS	*	
CR-144.	.590*ODEL 470) IN THE *		*	*		*	4				M. MOSER JR.	*	
	*MSFC 14 INCH TWT *		*	*		*	4			*-DN		*	
	*TO DETERMINE THE *		*	*		*	*			*		*	
	*PRESSURE DISTRIBU*		· *	*		*	*	,		*		*	
	*TION AROUND THE E*		· *	*		*	k			*		*	
	*XTERNAL TANK NOSE*		*	*		*	,			*		*	
	* *		*	*		*				*		*	
MSFC	- *AN INVESTIGATION *MO	DEL NO 470	*TO DETERMINE	THE *DDEC	ממווב	*0.0091	· / •	MSFC	,	*D	E. RAMSEY/MS	FC*DMS-DB	2-2208
14TWT	- *OF THE 0.0091SCAL*		*PRESSURE DIS		JUNE	*.6 -		MSFC	<u>-</u>		W WINKLER.		
509	/*E EXTERNAL TANK O*		*TION AROUND			*4 96					DAVIS/NSI	*JAN.	
TABF	*GIVE NOSE (MSFC M*		*OSE CAP	**		*					W SPARKS	*	
	591+ODEL 470) IN THE *		*	*		*		*** 11 TIND	1 CINIAL		M. MOSER JR.		
	*MSFC 14 INCH TWT *		*	*		*				* - DN		*	
	*TO DETERMINE THE *		*			· •	-					*	
	*PRESSURE DISTRIBU*	•		*		·	3			*		**	
	*TION AROUND THE E*		*					•				*	
	*XTERNAL TANK NOSE*			•		4	1	,		T.		ar sk	
	TATERINAL TANK NUSE*		~	<b>本</b>		~	71			<b>T</b>		-T	

					WIND	TUNNEL TEST	' / I	DMS DATA	PROCES	SSING					19
									+MODEL	,	*	*	COGNIZANT	* BAS	IC
TEST	* +		•	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING		TEST DMS	*PUBLIC	
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST			* AGENCY	*	PERSONNEL	*OR COM	MENTS
					·					· ·					
						<b></b>		<b>-</b>				. 5	o mender s	E-DMC DD	2000
RLAD		ESULTS OF A S		ODEL 43-0		STIGATE AER		ORCE	* 26		*ROCKWELL/		C MENNEL, F		197
WT		SHUTTLE VEHI				MIC STABILIT			* 26		*NRLAD -		FITZGERALD/R	JCK TOONE,	197
36		ERRY CONFIGUR				CONTROL CHA			*		*LOW SPEED *TUNNEL		B LOWE	•	
1124		DN AFTERBODY				RISTICS OF T			*		* I ONNE L	*-[		•	
₹~141,		ING OPTIMIZAT				FERRY CONFI	G:∗		*		•	*-L	MIS	T.	
		TUDY USING A			*URA	LION	*		*		* 	*		T	
		A/B 0 0405-SC			*		*		*	,	* 	# .le		·	
		DDEL ORBITER	· .		*		*		*		* -	*		<u>.</u>	
		-0) IN THE RO			*		*		*		T.	# 			
		LL INTERNATIO			*		*		*	,	₹ ••	**		*	
		75 X 11.0 FT			*		*		*		*	- L		*	
		W SPEED WIND			*		*		*		*	<del>*</del>		- T	
	*N	EL (OA124)	*		*		*		*		<b>τ</b>	- AT		Ţ.	
_	* _		*		*		*		*		* *ROCKWELL/	* *T	F FOSTER, V	v *DMS-DR	-2210
C				5-0 VIII (FLAT-F				EAT " I RANS	5*5,22	_	*ARC -		DYE/RI	*JUNE.	197
5HWT		ANSFER TEST_R		ATE CARRIER)		OF SURFACE			*5.24				K. LOCKMAN	**************************************	19.
0		TS FOR A GAP,				BERANCES AND			*		*3.5-FOOT F			*	
127		INDRICAL-PROT				C IMPINGEMEN			**		*NEL		E VAUGHN	*	
7-151,		ANCE, AND SHO				SURFACE HEAT				,	* N C L	*-[		wh.	
		MPINGEMENT FL				ND HEATING I			*	,	* •	- L	/14.3	*	
		LATE MODEL IN				JLATED TPS T	11.7		*	,	" *	*		*	
		NASA-AMES 3			*E G/	APS	.r.			,	r •			*	
		OT HYPERSONIC			*	,	*		-F		r <del>u</del>			*	
		D TUNNEL (TES			*		*		*		1 1	<i>*</i>		ale:	
		27, MODEL 15-	0 V+		*		*				<b>≁</b> ↓	· ·		*	
		11)	*		*		*		*		<b>7</b>			4	
	*		*		*		*	2205	*0 03	, ,	* *BOEING /		D KNUDSEN,	: *DMS-DD	-221
CA				03-SCALE AX 13				URCE	*0 03	,	*TBCA -		JGUSTYN, E D		
WT				I-1 (CARRIER) N					*0.70				N/BOEING CO	*SEPT.,	
31		CHARACTERIST				ONTROL CHARA			*0.70		*TUNNEL		A SARVER	*	
5				03-SCALE 45-0 (					-T-	,	* TOMMEL		H LINDAHL	*	
-141,				RBITER) MODEL		CARRIER AIRC			* *	,	~ •	*-0		*	
		ER(MODEL NO				CONFIGURATIO			τ •		•	L		*	
		319 I-1) MATE			,	VESTIGATE AE			, ,		•	- T		*	
		TH A SPACE SH				AMIC CHARACT			τ -		¬ *			*	
		E ORBITER (MO				ICS OF THE C			τ 	,	<del>-</del> •	- T*		*	
		5-0) CONDUCTE				R MATED WITH			4		<b>→</b>	*		*	
		N THE BOEING	₹₽ <b>Λ</b> *		*HE (	DRBITER, CAR	KI*		7	,	•	*		4.	
									.4.	-				*	
	*N	SONIC WIND TU (CAS)				ALONE, AND ITER ALONE	*		+	•	*	*		*	

				. <b></b>	•	MIND	TUNNEL TI	EST /	DMS DATA	PROCES	SING					192
	*	,		*		*		*		*MODEL		*	*	CDGNIZANT	* BAS	
TEST		•		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING		TEST DMS	*PUBLIC	
ID	4	REPO	RT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*		*OR COM	
3CA	- +	RESIDT	SOFAO	0240	O3-SCALE AX 13	) (abere	DMINE OF		anor		,					
TWT	- +	-SCALE	AFRODYN	IAM1 +C	FI-1 (CARRIER)	M+AMCE	CTADILIT	KPUKM*P	ORCE	*0 03 *0.15		*BOEING /		KNUDSEN, J		
131	/+	C CHAR	ACTERIST	TCS*C	DEL		NTROL CH			*0.15		*TBCA -	*AUGI	USTYN, E DIC		
15					03-SCALE 45-0	(*FRIS	TICS OF V	MADIN* '	•	*0.70		*TRANSONIC WIN *TUNNEL			*SEPT.,	1975
R-141.	803+	LE ORB	ITER (MO	DEL *C	RBITER) MODEL	*IIC C	ADDIED AT	10004*		•		* 1 014146 F		A SARVER H LINDAHL	*	
•	+	45-0)	CONDUCTE	D *			ONF I GURAT			•		* •	**-DM		*	
			BOEING			* · INV	ESTIGATE	AFDO*				T.		<b>&gt;</b>	*	
	+	NSONIC	WIND TU	NNE*			MIC CHARA			*		···	±		*	
	*	L (CA5	)	*			CS OF THE			*		· <b>*</b>	*		*	
	*			*			MATED WI			*	,	· *	*		*	
	*			*			RBITER, CA			*	,	*	*		*	
	*			*			ONE, AND			*	3	*	*		*	
	*			*		*ER A	LONÉ	*		+	,	*	*		*	
	*			*		*		*		*	,	*	*		*	
CA	<b>→</b> +	RESULT	OF A O	.03+0	03-SCALE AX-13	1+DETE	RMINE PER	RFORM∗F	DRCE	+0 03	/ / ·	*BOEING /	*R D	. KNUDSEN, J	*DMS-DR	-2211
WT	- *	-SCALE	AERODYN	AMI *9	I-1(CARRIER) N	IO*ANCE	,STABILI7	FY,AN+		*0.15	<b>-</b> ,	*TBCA -	*AUGI	USTYN, E. DIC	K*VOLUME	03
31			CTERIST			*D CO	NTROL CH/	\RACT*		*0.70	,	*TRANSONIC WIN	D*SON,	BOEING CO.	*SEPT .	
5	*	INVEST	GATION	OF_*C	.03-SCALE 45-0	(*ERIS	TICS OF V	/ARIO*		+		*TUNNEL		A SARVER	*	
-141,	BU4*	A ROFIL	NG 747 C	ARR+0	RBITER) MODEL					*	,	*	*R. I	H LINDAHL	*	
			DEL NO				ONF I GURA1			+	•	*	*-DM	\$	*	
			1) MATE				ESTIGATE			*	,	*	*		*	
			SPACE SH				MIC CHARA	-		*	,	*	*		*	
			TER (MOI				CS OF THE			*	*	*	*		*	
			CONDUCTED BOEING				MATED WI			*	٨	+	*		*	
			WIND TU				RBITER, CA			*	4	<b>k</b>	*		*	
		L (CAS		ININE.*			DNE, AND C	RBIT*		*	*	k	*		*	
	*	L (UAS	,	- T		≯ER AI	LUNE	*		*	*	<b>k</b>	*		*	
c	- *	INVEST	CATTONS	UE*I	AUNCH VEHICLE 5		MB4TAIR TAIT	*	on or	*	, ,	k	*		*	
TWT	- *	THE O	20-SCAL	Urt.	AUNCH VEHICLE S		VEHICLE S			*0 020	•	*ROCKWELL/		E. NICHOLS/RI		
3			INTEGRA				RESSURE D		RESSURE	*0.6 *1.4		*ARC -		R. EDWARDS	*VOLUME	
80			HUTTLE	*			IONS. ELE			* 1 4		*11-FOOT TRANS *NIC WIND TUNN		5	*OCT .	1976
-147.6			JET-PLI				RUDDER HI			*		THE WIND TOWN	<u>.</u> *		*	
•			N THE N				NTS. AND			τ ±	,	L (UNITARY)	- <b>π</b>		*	
			RESEARC				VERTICAL-			*	1	·· k	*		~ *	
			1X11-F0				OT BENDIN			*	r k	k	*			
			PLAN W				TORSIONAL			*		: <b>Y</b>	*		*	
			(IA80)	*			DUE TO M			*	r k	· •	*		*	
	+		- •	*			RB PLUME			*	,	k	*		*	
	+			*		+RACT		*		*	,	<b>,</b>	*		*	
						*	· · · <del>-</del>								•	

					WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING						_	193
				*	*		*		*MODE1	 L	*		*		OGNIZANT	* BASI	IC
TEST		+		* CONFIGURATION	*	TEST	+	TYPE OF			E*	TESTING	*	TE	ST DMS	*PUBLICA	TIONS
ID			REPORT TITLE	+ TESTED	*	PURPOSE	*	TEST	*MACH	RANG	E٠	AGENCY '	*	P	PERSONNEL	*OR COM	IENTS
ARC	_	*IN	NVESTIGATIONS OF	**LAUNCH VEHICLE !	+DET	ERMINE INTEGR	A+F	ORCE	*0 020	o /	+R	OCKWELL/			NICHOLS/RI		
11TWT			HE 0.020-SCALE			VEHICLE SURF			*O 6	-		RC -		R	EDWARDS	*VOLUME	-
023	/	*88	3-OTS INTEGRATED	<b>)</b> *	*CE-	PRESSURE DIST	R*		*14			1-FOOT TRANS		MS		*0CT.,	1976
OBAI		* SF	PACE SHUTTLE	*	*IBU	TIONS, ELEVON	<b>!</b> *		*			IC WIND TUNK	1E *			*	
CR-147,	633	*VE	HICLE JET-PLUME	+	*AND	RUDDER HINGE	*		*		*L	(UNITARY)	*			*	
		*M0	DEL IN THE NAS	*	*MQM	ENTS, AND WIN	iG*		*		*		*			*	
		* A/	AMES RESEARCH C	<b>:</b> *	*AND	VERTICAL-TAI	*		*		*		*			*	
			TER 11X11-FOOT		+L R	OOT BENDING	*		*		*		*			*	
		+UN	IITARY PLAN WIND	)*	*AND	TORSIONAL MO	\M*		*		*		*			*	
		*Tl	JNNEL (IA8O)	*	*ENT	S DUE TO MPS	Α*		*		*		*			*	
		*		*	*ND	SRB PLUME INT	E*		*		*		*			*	
		*		*	*RAC	TIONS	*		*		*		*			*	
		*		*	*		*		*		*		*	_		*	
ARC	~	* I N	NVESTIGATIONS OF	**LAUNCH VEHICLE \$					*0 020	-		DCKWELL/			NICHOLS/RI		
I 1TWT	-	*T	HE O O2O-SCALE	*	*TED	VEHICLE SURF	A*P	RESSURE	*Q 6	-		RC -			EDWARDS	+VOLUME	
023	_ /	*88	3-OTS INTEGRATED	)*		PRESSURE DIST			<b>+1</b> 4			1-FOOT TRANS		MS		*0CT	197
IABO		*SF	PACE SHUTTLE	*		TIONS, ELEVON			+			IC WIND TUNK				*	
CR-147,			EHICLE JET-PLUME		*AND	RUDDER HINGE	*		*		*_	(UNITARY)	*			*	
		*M0	DDEL IN THE NAS	*	*MOM	ENTS, AND WIN	1G*		*		*		*			*	
		*A/	'AMES RESEARCH C	C*	*AND	VERTICAL~TAI	*		*		*		*			*	
		*EN	NTER 11X11-FOOT	*	*L R	OOT BENDING	*		*		*		*			*	
		*UN	NITARY PLAN WIND	)*	*AND	TORSIONAL MO	)M+		*		*		*			*	
		+Tl	JNNEL (IA8O)	*	*ENT	S DUE TO MPS	Α*		*		*		*			*	
		*		*	*ND	SRB PLUME INT	E+		*		*		*			*	
		*		4	*RAC	TIONS	*		*		*		*			*	
		*		*	*		*		*		*		*	_		*	
ARC	-	+11	NVESTIGATIONS OF	*LAUNCH VEHICLE !					*0 020	,		OCKWELL/			NICHOLS/RI		
11TWT	-	*T	HE O.O2O-SCALE	*		VEHICLE SURF		RESSURE	*0 6	-		RC -	*C.		EDWARDS	*VOLUME	
023	- /	<b>*8</b> 8	3-OTS INTEGRATED	)+		PRESSURE DIST			*1.4			1-FOOT TRANS		MS		*OCT ,	1976
IABO		<b>*\$</b>	PACE SHUTTLE	*		TIONS, ELEVON			*			IC WIND TUNK				*	
CR-147,	635	*V[	EHICLE JET-PLUME	<b>≛</b> *		RUDDER HINGE			*		* L	(UNITARY)	*			*	
			DDEL IN THE NAS			ENTS, AND WIN			4		*		*			••• •••	
		* A	AMES RESEARCH C	C*		VERTICAL-TAI			*		*		*			# 	
			NTER 11X11-FOOT				*		*		*		*			<b>~</b>	
			VITARY PLAN WIND	)*		TORSIONAL MO			*		*		*			*	
		*10	JNNEL (IA8O)	*		S DUE TO MPS			*		*		*			*	
		*		*		SRB PLUME INT	E*		*		*		*			*	
		*		*	*RAC	TIONS	*		*		*		*			*	
		*		*	*		*		*		*		*			*	

						WIND	TUNNEL TEST	· /	DMS DATA	PROCES	SSING						19
	*			*	=====	*		*		+MODE!		*		*	COGNIZANT	* BASI	
TEST	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	+ TESTI	NG	*	TEST DMS	*PUBLICA	
ID	*	REPORT	TITLE		TESTED	*	PURPOSE	*	TEST			* AGENC		*	PERSONNEL	*OR COMM	
₹C -	- *R	ESULTS O	F INVES	 T*14	OC MODIFIED SPA	*NRT	IN HYDERSON		 ODCE	*0.004	~	*ROCKWEL	 . /		L HARTIONIS (O.		
Г -	* * I	GATIONS	ON AM O	*CE	SHUTTLE ORBITE	+LON	SITUDINAL AN	JD *	OKOL	*19 8			-/		HAWTHORNE/R: WOODS/LARC		
-31	/+0	04-SCALE	140C M	0*R	MODEL 74-0		RAL-DIRECTI			*19.8					G MCDONALD	*APRIL,	197
39		IFIED CO					STABILITY A			* 13.0		*ROGEN TI				-T-	
-141.51		ON SPACE				*CUN.	ROL CHARACT	ED+				TRUGEN I	OIAIAEE	* - DIV	3	*	
•		EHICLE O					CS OF THE U			•		*		*		*	
		DDEL (74					SSV CONFIG			±		₹ ⊥		**		*	
		E NASA/L					N IN AN INI			T.	•	<b>*</b>		**		*	
		SEARCH C								*	,	**		*		*	
		ERSONIC		•			/ DIATOMIC M	IFD*		*	,	*		*		*	
		JNNEL (O.		1N 7		*IUM		*		*	,	*		*		*	
	*	DIVINEL (U.	HOD)	*		*		*		*	,	*		*		*	
, -		DED WIN	C CLIDEA			* · . — —   ·		*		*	,	*	_	*		*	
,	~UI	POWNER WIN	G SUKFA	G * 5 5	V ORBITER CONFI	*10	NVESTIGATE	TH*F	DRCE	<b>*4</b> 6		*LARC	/		IARD SPENCER, J		2215
YI -	* * "	BOUNDAR	Y LAYER	*GU	RATION 140A/B-C					*4 6		<b>⊁LTV</b>	-	* ,R	L STALLINGS	,*FEB ,	197
2	/ * M	ASUREME	NIS AND	* • C			ER BOUNDARY			*	,	*HIGH SP	EED WI	N*JR	,LARC,T.C POI	₽*	
58	*5	TATIC AE	RODYNAM:	I *		*AYEF	CHARACTERI	ST*		*		+D TUNNE		*E.L		*	
144,59		DATA OB				*ICS	AT ANGLES O	<b>F</b> ★		*	,	*		*R	H LINDAHL	*	
		AN 0 01				*ATT/	ICK FROM -4	TO*		+	,	*		*-DM	IS	*	
		DDEL OF				*32	EGREES AT A	*		*	,	*		*		*	
		BITER C				*MACH	NUMBER OF	4.*		*	,	*		*		*	
		ION 140A,				*6 TH	E EFFECT OF	L*		*	,	*		*		*	
	*E	LTV ASW	TATA	<b>V</b>  *		*ARGE	GRIT WERE	IN*		*	,	*		*		*	
	*A(	CH NUMBER	R OF 4 6	6*			IGATED PLUS			*	,	*		*		sk:	
	*(1	.A58)		*			TS OF LARGE	_		*	,	*		*		*	
	*			*			IVE ELEVON			*	,	k		*		 	
	*			*			TION ON LEE			*	,	k					
	*			+			SEPARATION.	_		•		b		J.			ď
	*			+		*	DEI MANT TON.	٠.				r L		-T-		4.	
₹C -	*R1	SULTS O	F AERNTI	1*SP	R	•	IN AERODYNA		EAT_TOANG	*A 044	, ,	, MCCA	,	*	B. BREWER/MSFO	·*	0045
		MODYNAM					ATING DATA			*3.7	•	*LARC	/	* E	D. CKEWEK/MSF(	.*UMS*UK";	2216
		TEST OF				*SRB	ATANG DATA	*		*3.7			 	*U.I	.DAATE!	*AUGUST,	197
2F		SCALE MO				. 240		- T		<b>~J</b> /		*UNITARY		₩₩₩⊅₩	3	<b>本</b>	
		ROCKET				- -		<b>*</b>		T.	*	∗IND TUN	AFF	*		*	
		THE NA				Ψ.		<b>本</b>		र '	*	<b>K</b>		*		*	
		JITARY PI				<b>₹</b>		*		*	3	r		*		*	
						*		*		*	*	k		*		*	
	τU	TUNNEL	(5H12r)	*		*		*		+	*	<b>+</b>		*		*	
	*			*		*		*		*	4	b .		*		*	

WIND TUNNEL TEST / DMS DATA PROCESSING	199
1100 44	IZANT * BASIC
URATIONS * TEST * TYPE OF * SCALE* TESTING * TEST [ STED * PURPOSE * TEST +MACH RANGE+ AGENCY * PERSO	DMS *PUBLICATION: ONNEL *OR COMMENTS
STED * PURPOSE * TEST +MACH RANGE+ AGENCY * PERSO	
	ALA,V ES*DMS-DR-2217
SSV ORBIT*TION 140A/B AND 7*	L GILLI*VOLUME O1
B *47 CARRIER MODELS* *O 30 - *TRANSONIC WIND*NS,M PE	
LE 747 CA*WERE TESTED TO P * *O 60 *TUNNEL *C R MU!	LLEN,BOEI*
DEL *ROVIDE SIX-COMPON* * * *NG AEROSE	
*ENT FORCE AND MOM* * * *D. A. SAI	
*ENT DATA FOR EACH* * * * * # H LIF	NDAHL *
*VEHICLE IN PROXI * * * *-DMS	*
*MITY TO THE OTHER* * * *	*
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*EST CONDITIONS AN* * * *	*
*D TO DETERMINE OR* * * *	*
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*ENT FORCE AND MOM* * * *D. A SAI	NVER *
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						WIND	TUNNEL	TEST /	, t	DMS DATA	PROCES	SSING						196
	+			*		*			*		*MODE!	 L	*		*	COGNIZANT	* B/	SIC
TEST					ONFIGURATIONS	*	TEST	Γ	+	TYPE OF	*	SCALI	* TESTI	NG	+	TEST DMS		CATIONS
ID	*	REPORT T	TTLE	* 	TESTED	*	PURPOS	SE 	*	TEST	*MACH		* AGENC		*		*OR CE	MMENTS
TBCA	- <b>∗</b> ∆	ERODYNAMI	C RESU	I +0 0	3-SCALE 45-0 N	#+∩DD T	TED COM	de rouma	457	nner	* 0 0	20	*5057NO	,		B9711044 4 4.		
BTWT	- *T	S DE A SE	PARATI	กะการ	FIED SSV ORBIT	******	1404/6	NEIGUKA 2 AND 7	* T L				*BOEING *TBCA	•		DZIUBALA,V		
1431	/*N	TEST(CA2	o) con	D*FR	1404/R		ARRIER				*0.30			- To With		RZA,R. L G		
CA20					3-SCALE 747 CA						*0.50		*TUNNEL	IC MIN		M PETROZZ		1976
CR-141.	846*N	G TRANSON	IC WIN	D*RRI	ER MODEL		DE SIX-				**		* I OINIAET			R. MULLEN,I	BOEI*	
		UNNEL USI					FORCE A				*		*			A. SARVER	** **	
	*3	O-SCALE M	ODELS	<b>D</b> *			DATA FO				*		*			H. LINDAHL	*	
		THE CONF					CLE IN				*		*		*-D1		* •	
	*0	N 140A/B	(MODIF	I *			TO THE				*		+		*	13	*	
	*E	D) SSV OR	BITER	(*			MATRIX				*		+		*		· ·	
	* M	ODEL NO	45-0)	<b>4</b> *			CONDITI				*		*		*		*	
	*N	D THE BEO	ING 74	7*		+D TO	DETERM	AINE OR	*		*		*		*		*	
	*C	ARRIER (M	ODEL N	J+		*BITE	R TARE	EFFECT	*		*		*		*		*	
	*.	AX 1319	I-1)	*		*S TO	OBTAIN	N SUPPO	*		*		*		*		*	
	*			*		*RT-F	REE AER	RODYNAM	*		*		*		*		*	
	*			*		+ICS			*		*		*		*		*	
	*			*		*			*		*		*		*		*	
AEDC	- *P	RESSURE A	ND HEAT	[*EXT	ERNAL TANK	*TO 0	BTAIN E	BASIC H	*HE	EAT-TRANS	*0 38	-	*MSFC	/	*1_	G SILER,	A. H∗DMS-D	R-2218
HWTF		RANSFER T				*EATI	NG AND	PRESSU	*		*1 10		*AEDC	_		BOUDREAU/AR		. 1977
25A	/*E	SULTS ON	THE SI	>*		*RE D	ISTRIBU	JTION D	*		*		*HYPERVE	LOCITY		R CARROLL		•
TH1F		CE SHUTTL				*ATA	ON ET		*		*					E. VAUGHN	*	
CR-151,		SCALE EXT				*			*		*		*)	1 1	*-D1		*	
		NK AT MACI		۱ *۱		*			*		*		*		*	-	*	
	+Α	EDC TUNNE	L F	*		*			*		*		*		*		*	
	*			*		*							±		al.			

					WIND	TUNNEL TES	ST /	DMS DATA	PROCES	SING					197
					*		*		*MODEL		+	*	COGNIZANT	* BAS	C
TEST	*	•	*	CONFIGURATION	S *	TEST	*	TYPE OF	+	SCALE	* TESTING	*	TEST DMS		
ID		REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	⋆ AGENCY	*	PERSONNEL	*OR COM	IMENTS
		RESULTS OF AN I	KIS Jul I	AUNCH VEHTOLE	e .nee	THE THE DAG	E D+E	ODCE	*0 010		*ROCKWELL/	*P	J. HAWTHORNE	/R*DMS-DR	-2219
C SWT		ESTIGATION OF J		AUNCH VEHICLE	#DEC	SURE ENVIRO	NIME * D	DESCIDE		-	*ARC -	*I	<b>.</b>	*VOLUME	
3 W I		PLUME EFFECTS OF				OF THE FIRS		KESSONE	*3 50		*8-FOOT BY 7-		M. MANN	*APRIL,	1976
82C		AN O O10-SCALE				SECOND STAC			*		*OT SUPERSONI			*	
		MODEL (75-OTS)				ED VEHICLE			*		*WIND TUNNEL			*	
- 144,	_	THE SPACE SHUTT				SUPERSONIC F			+		*NITARY)	*		*	
		E INTEGRATED VE				LD FROM MAG			*		*	*		*	
		CLE IN THE 8- B				O THROUGH 3			*		*	*		*	
		7-FOOT LEG OF T				H SIMULATED			*		*	*		*	
		NASA/AMES UNITA				T ENGINE EX			*		*	*		*	
		Y WIND TUNNEL (				PLUMES DET			*		*	*		*	
		*82C)	IA.		_	PRESSURE E			*		*	*		*	
	,	·82G /	*			MENT OF THE			*		*	*		*	
		, ,	r u			ER AT VARIO			*		*	*		*	
		•	T.			IT PORT LOCA			Ψ		*	*		*	
					*NS.		*		*		*	*		*	
		•	۳ ب		* 143.		*		*		*	*		*	
	-	RESULTS OF AN I	4 8137-1-1	AUNCH VEHTCLE	= +NEC	THE THE RAS	E D*E	DECE	*0 010	, /	*ROCKWELL/	*P	J. HAWTHORNE	/R*DMS-DR	-2219
C.		ESTIGATION OF J		AUNCH VEHICLE	*DEC	SURE ENVIRO	NME * D	DESCHIDE		•	*ARC -	*Ī	• • • • • • • • • • • • • • • • • • • •	*VOLUME	
SWT		PPLUME EFFECTS OF				OF THE FIRS		KESSONE	*3 50		48-FOOT BY 7-	-	M MANN	*APRIL,	
800						SECOND STAC			*		*OT SUPERSONI			*	• • • • • • • • • • • • • • • • • • • •
82C		AN O OIO-SCALE				ED VEHICLE			*		*WIND TUNNEL			*	
-144,		MODEL (75-OTS)				SUPERSONIC F			*		*NITARY)	*		* '	
		THE SPACE SHUTT				LD FROM MAG			*		*	*		*	
		E INTEGRATED VE				O THROUGH 3			•		+	*		*	
		CLE IN THE 8- B				H SIMULATED			*		*	*		*	
		7-FOOT LEG OF T				T ENGINE EX			*		*	*		*	
		NASA/AMES UNITA							•		*	*		*	
		Y WIND TUNNEL (	IA*			PLUMES. DET PRESSURE E			*		*	*		*	
	1	*82C)	*			MENT OF THE			•		sk	*		*	
	١		*								•	*		*	
	*	<b>,</b>	*			ER AT VARIO					uk	*		*	
	*	<b>k</b>	*			IT PORT LOCA	* *ITO*				*k	*		*	
	4	<b>r</b>	*		*N5		*		T			*		*	
	4	<b>k</b>	*		*		*	oner	r 4		*LARC /	*17 5	WATSON	*DMS-DR	2-2220
RC	- 1	t	*		*		*+	ORCE	4 J.		*LARC /	*-DN		*TO LRO	-
HT6	- 1		*		*		*		<b>本</b>		*LARC - *20-INCH HYPE		13	4 10 LRC	•
8	/ 1	<b>k</b>	*		*		*		*					*	
152	1	r	*		*		*		*		*ONIC TUNNEL	ĮNI* *		* *	
	1	t e	*		*		*		*		*ACH 6)	*		* *	
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					WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING					198
	+		 *		+		*		*MODE	 !	*	*	COGNIZANT	* BASIC	
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF		_	* TESTING	*	TEST DMS	*PUBLICAT	
ID	*	REPORT TIT		TESTED	*	PURPOSE	*				* AGENCY	*	PERSONNEL	*OR COMME!	
RLAD	- *	INVESTIGATIO	N DF *1	40C CONFIGURATIO	ות חד*ו	FEINE OPRITE	D*D	PESSIBE	* 040	5 /	*ROCKWELL/	*5 5	RUSSELL/ R.	**************************************	221
SWT	- *	SPACE SHUTTL	E VEH*N	ORBITER ( MODEL	*WHEET	L WELL PRESS	*	NESSONE	* 20		*NRLAD -	*.	, 1000111, IV.		197
37		ICLE 140C CO				LOADING AND			* 23			•	. MENNELL/ R.		
4143	*	RATION ORBITI	ER *			FFECT ON LAN			*		*TUNNEL	* I	•	*	
R-141,	548*	(MODEL 16-0)	WHEE*			GEAR THERMAL			*		*		A. SARVER	*	
•		L WELL PRESSI				LATION, TO I			*		*		B. MEINDERS	*	
	+	OADS IN THE	ROCKW+			IGATE THE PR			*		*	* - DM		*	
	*	ELL INTERNAT	IONAL*			E ENVIRONMEN			*		*	*		*	
		7.75 X 11 FO				THE HORIZONT			*		*	*		*	
		IND TUNNEL (				IGHT NOSE PR			*		*	*		*	
		3 )	*			ND AIR VENT			*		*	*		*	
	*	,	*			PROBES.	*		+		*	*		*	
	*		*		*		*		*		+	*		* '	
EDÇ	- *	RESULTS FROM	A CO+B	25C10M4F10E26R5V	*RE-EI	NTRY CONVECT	ГІ∗Н	EAT~TRANS	\$*0.01	75 /	*ROCKWELL/	*B ₁	J. HERRERA/RO	CK*DMS-DR-2	222
WTB		NVECTIVE HEAT				EAT TRANSFER			*8.0		*AEDC -		L INTERNATION		
7A		NSFER-RATE D				S ON THE ORE			*8 0		*HYPERSONIC				197
H49B	,	BUTION TEST			*TER	, OIT 7112 OIL	*		*		*D TUNNEL (		E. VAUGHN	*	
₹-147.		O 0175 SCALE			*		+		*		*	*-DN		*	
		L(22-0) OF T	-		*		*		*		*	*		*	
		CKWELL INTER			*		*		*		*	*		*	
		NAL VEHICLE			*		*		*		*	*		*	
		CE SHUTTLE CO			*		*		*		*	*		*	
		URATION IN TH			*		*		*		*	*		*	
		DC-VKF TUNNE			*		*		*		*	*		*	
		H49B)	*		*		*		*		*	*		*	
	+	11.400)	*		*				*		•	*		*	
EDC	- *	RESULTS FROM	A COVE	25C10M4F10E26R5y	*DF-FI	NTDY CONVECT	   ▼ * # #	FAT - TDAM	*** O O 11	75 /	*ROCKWELL/	*B.	J. HERRERA/ROC	·×DMS-DD-2	222
WTB		NVECTIVE HEA				EAT TRANSFER		ILMI INAN	*8 0		*AEDC -		L INTERNATION		
7A	/*	NSFER-RATE D	TSTDI*			S ON THE ORE			*8 O		*HYPERSONIC		L INICKNATIO		197
H49B		BUTION TEST			*TER	S ON THE ORD	) I T		.00		*D TUNNEL (		E VAUGHN	*	151
		0 0175 SCALE			* I CK		Ţ.		±		*U TOMMEL (E	, *∪. *∽DN		•	
. 147,		L(22-0) DF TI			¥				*		*	*-DI	13	*	
		CKWELL INTER			*		*		*		*	*		*	
		NAL VEHICLE			**		*		*		*	*		· *	
		CE SHUTTLE CO					*				*	str.		*	
		URATION IN T			T		т •		*		•	*		*	
		DC-VKF TUNNE			T		T.		٠ -		•	*		*	
		DC-VKF TUNNET H49B)	ר פוט∗		т 		*		т "		4	*			
	τ.	114 20 J	*		T.		₹		*		T.	<b>∓</b>		Tr.	

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									WIND T	UNNEL TE	 ST /	DMS DATA	PROCES	SSING						199
																	 *	COGNIZANT	* B	ASIC
		*			*				*	TECT	Ψ.	TYPE OF	*MODEI		* * TEST]	ING		EST DMS		ICATIONS
TEST		*	nenon:		*	CON	FIGURAT			TEST PURPOSE		TEST			* AGEN		*	PERSONNEL		OMMENTS
ID		*	KEPUK	TITLE	. *		TESTED		* 											
SFC	-	+RE	EENTRY	STATIC	ST+0	RB W	/ ATTAC	H RIN	*TO ES	TABLISH	STAT*F	ORCE	<b>*0.4</b>		+MSFC	/		) JOHNSON/M		
4TWT	_	*A8	BILITY	CHARAC	TER*G	.AFT	RING.W	/AND	*IC ST	ABILITY	CHAR*		*4 45		*MSFC	-	*C		*JULY	, 1975
04	/	/*IS	STICS (	OF A .O	054*W	1/0 PI	ROTUBER	ANCES	*ACTER	ISTICS O	F SR*		*					. PRAHARAJ,		
A8F	•			E MODEL						ING REEN			*		*IC WIND	TUNNE		BRADDOCK/N	SI*	
	549	9*6-	-INCH S	SOLID R	OCK*O	RB W	/ ALL P	ROTUB	*		*		+		*			LOWE	*	
				TER TES					*		*		*		*		*-DMS	j	*	
				VASA/MS				SHIE	+		*		*		*		*		*	
				NCH TWT					*		*		*		*		*		*	
		*			*				*		*		*		*		*		*	
ARC	-	*RE	ESULTS	OF A D	RAG*7	2-OT	s (ORB	. ET.	*INVES	TIGATION	OF *F	ORCE	* 0.0	10 /	*LARC	/		IARD SPENCER		
ARC				ON INVE			_ ,	•	*SPACE	SHUTTLE	LAU*		*0 6	-	*LARC	-	*R /L			н, 1978
99				ON AN O		,				EHICLE D			*12		*NASA LA	ANGLEY I	R*GEOR	GE M. WARE/	LA*	
PT	•			MODEL	-					TION AT			*		*ESEARCH	1 CENTER	R*RC		*	
\56		_		CE SHUT						RS 0.35			*		*8-F00T	TRANSOI	<b>√</b> 1*J. ¥	∤ BALL	*	
	650			72-0TS					* 20		*		*		*IC PRES	SSURE TI	J∗G. 0	MCDONALD	*	
(- 147,	650	_		ONFIGUR					*		*		*		+NNEL		*-DMS	3	*	
				ED IN T					*	5-	*		*		*		*		*	
				FOOT TR					*	•	*		*		*		*		*	
				FOO! IK ESSURE					*		*		*		*		*		*	
				THE MA					*		*		*		*		*		*	
				F O 35					*		*		*		+		*		*	
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		* 1.	.20 (L	ASOJ							*		*		*		*		*	
		*		*******	* * A T E Lat B	ione i	040	LINEC	* *TO EM	ALLIATE A	EDOD*H	EAT-TRAN	ร*ก ดา	75 /	*RI	1	+M 0	UAN,C W. C	RA*DMS-	DR-2225
DC								L'INE 2	THE STATES	C HEATIN	CKOD	LAI INMI	*8	,	*AEDC	<u>-</u>	*IG/F			H. 1975
ITB_				TO INV		/L /O-(	000139			OF TILE			*8			INTO WIL		. SARVER	*	,
352	/			FFECTS						PS TILE	-		*					MOSER JR	*	
14C				ES ON H						TH AND O			<u>.</u>		*	(6)	*-DMS		*	
-141,	50:	_		ES OF T						N TO THE			*		*		*	•	*	
				L SPACE									- -		*		*	_	*	Æ
				RBITER						E INVEST	IGAIT		τ -		*		*	•	*	E
		_		, MODEL	. 21*				*ED				*		*		*		*	(Pine)
		*-(	()		*				<b>₹</b>						*		*		*	
		*			*				*		*		*		•					9
																				FOOD
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					WIND	TUNNEL TEST	/ 0	MS DATA	PROCESS	SING					20
			*		*		*		+MODEL	<b></b> ;	 +		* (	OGNIZANT	* BASIC
TEST	*		* (	ONFIGURATIONS	*	TEST	*	TYPE OF		SCALE,		NG	_	ST DMS	*PUBLICATION
ID		REPORT TITLE	*	TESTED	*	PURPOSE	*				* AGENC			ERSONNEL	*OR COMMENTS
AEDC	- *RE	SULTS OF FLOW	V*SP#	CE SHUTTLE VEH	+OIL	FLOW VISUAL:	IZ*FC	RCE	* 3 75	<b>-</b> ,	∗RI	/	*J J.E	AILEDA/ROC	KW*DMS-DR-2226
SWTA	- *IS	<b>UALIZATION TES</b>	T*ICL	E CONFIGURATIO	OITA*C	N	*		* 5 03	,	*AEDC	_	*ELL		*FEB , 197
VA422	/+S	OF 0.010-SCALE	*N 3	MODEL 32-OTS	*		*		*	,	+SUPERSO	NIC WI	1*W R N	MARTINDALE/	AR*
2144	/*SP	ACE SHUTTLE	*5P/	CE SHUTTLE ORE	3*		*		*	,	*D TUNNE	L (A)	*0, INC	2	*
IA61B	*M0	DELS 32-DTS AN	D*ITE	R MODEL 52-0	*		*		*	;	+		*D A.	SARVER	*
CR-141.	507+52	-D IN THE AEDC	*		*		*		*	:	*		∗G G.	MCDONALD	*
	*VK	F TUNNEL A (IA	*		*		*		*	1	*		*-DMS		*
	*61	B)	*		*		*		*		*		*		*
	*	-•	*		*		*		*		*		*		*
MSFC	- *RE	SULTS OF EXPER	I *ORE	/W/ET AND SRE	3*EFFE	CTIVENESS OF	F *FC	RCE	* 0 00	40 /	+RI	1	∗E C	ALLEN/R	I *DMS-DR-2227
14TWT		NTAL TESTS IN							*0 60		*MSFC	-		WATSON	*NOV , 197
610		MSFC 14X14 IN							*1 96		*14-INCH	TRISO			*
IA71		TRISONIC TUNNE				RSIGNAL AND			*		*IC WIND				*
		A .004 SCALE				NG MOMENTS	_		*		*		*		*
• • • • • • • • • • • • • • • • • • • •		EL SPACE SHUTT				ONIC + SUPE			*		*		*		*
		INTEGRATED VEH	_			C MACH NO'S			*		*		*		*
		E 5 (MODEL 77-				NTERED DURI			*	:	*		*		*
		74-TS) TO RELI	-		*LAUN		*		*		*		*		*
		WING LOADS DU			*	017	*		*		*		*		*
		IG ASCENT (IA71			· ·						±		*		*
	· 11	IG ASCENT (TA)	, 		<i></i>		· ·		•		sk		*		*
LARC	. u		4		4		*E/	DRCE			*LARC	,	*h b	WATSON	*DMS-DR-2228
UPWT			•		ı		- T	NGL	·-		+LARC	_	*-DMS	#H 1 5011	*TO LRC
1092/11	17/4		±		<u>.</u>		- T		T		*UNITARY	/ DI ANI			*
1117	//*		ж ш		<i>₹</i>		- T		T		*IND TUN		π.		Ψ Ψ
LA46A/B			-π -1-		*				<b>4</b>		**	MACE	<b>4</b>		•
LA4GA/ B	*		* 		**				*		T.				*
		COLUMN OF FLOW	*	/	* . TO D		* ~		* 0.045	,	T TOOKUEL	1.7		ALTOURIE / F	I *DMS-DR-2229
LARC		SULTS OF FLOW-		140A/B		ETERMINE SE		JRCE	*0.015	•	*ROCKWEL	-L/			
8TPT		UALIZATION INV				ON ZONES, FI			*0.6		*LARC	- 		. SARVER	*FEB., 197
687	•	IGATIONS ON A				CIRCULATION			*12					. MCDONALD	*
DA 102		15-SCALE MODIF				NS, AND POT			*		*IC PRES	SURE I	U*-UMS		*
CR-141,		CONFIGURATION				VENTING AN			*		*NNEL		*		*
		IOA/B SPACE SHU				AMINANT-ING			*		*		*		*
		E VEHICLE ORBI			*TION	PROBLEM ARI	EA*		*		*		*		*
	*ER	(WODEL 30-0)	<b>!</b> *		<b>*</b> S		*		*		*		*		*
		THE LANGLEY RE	S*		*		*		, *		*		*		*
	+EA	RCH CENTER	*		*		*		*		*		*		*
	*		4		•		•		•				*		*

OF POOR	ORIGINAL
QUALITY	S

2	202					SING	PROCES	DMS DATA	ST /	WIND TUNNEL TES					
-	* BASIC	COGNIZANT	*		 *	,	*MODEL		*	*		*		*	
-	*PUBLICATIONS	TEST DMS		FSTING	* TEST			TYPE OF	*	* TEST	CONFIGURATIONS	*		*	TEST
	*OR COMMENTS	PERSONNEL					*MACH	TEST	*	* PURPOSE	TESTED	E *	EPORT TITLE	*	ID
_		PERSONNEC													
		_								. 70 00700	3DEL 24 0 00ME	VECTANO.	III TO DE TAN	_ +55	SFC
	*DMS-DR-2232	E. NICHOLS/RI			*ROCKWE		*0 004	ORCE			DDEL 74-0, CONF	/E3 *MU	TTONC ON TH	- 1KG	4TWT
5	*JUNE, 1975	A SARVER		-	*MSFC		*0 60			*DARY-LAYER SEP			TIONS ON TH		41WI 07
	*	M. MOSER JR	SON*M M	INCH TRISC	*14-INC	*	*2 75			*TION AND REGIO			4-SCALE MOD		-
	*	4S	NEL * - DMS	WIND TUNNE	IC WIN	4	*			+OF POTENTIAL A			O OF THE CO		A131
	*		*		+	*	*		CULA*	*EXHAUST RECIRC			ATION 4 (MO		R-141,
	*		*		+	1	*		RANS+	*TION DURING TR			) SPACE SHU		
	*		*		+	k	*		SUPE*	ONIC AND LOW S		ITER*	EHICLE ORBI	*E '	
	*		*		k	4	*		RY F*	*RSONIC RE-ENTR		SFC *	THE NASA/MS	*IN	
	*		*		k	k	*		*	*LIGHT		TR *	BY-14-INCH	*14	
	*		sk		*	k	*		*	*		JNNE *	NIC WIND TO	* I S	
	*		*		k		*		*	*		*	DA131)		
	т -					,	*		*	*	•	*	- · ·	*	
	*DUC DD 0000	COTHOTO IO			*LARC		*0 35	DOCE		*TO DETERMINE E	2-OTS (B26C9E44F	18AG+72	ULTS OF A C	- *RE	ARC
		SPENCER, JR.,					*1 20	DRCE		*TO DETERMINE E	DFL 10/11M16N28/8	ST *10	ICTION INVE	- *RFI	TPT
1	*JUNE, 1977	M. WARE/LARC	*G 17		*LARC		*1 20		0014	ANTICUDATIONS	PS1-SR5S21T2.V8W	0.0+60	TION ON AN	/*TG	03
	*	E. VAUGHN					*					DE#14	SCALE MODEL	y 10,	459
	*	M. MOSER JR.					*			*PONENTS ON TOT					
	*	45	*-DMS	_	<b>NNEL</b>	4	*		j *	DRAG OF VEH 5			SPACE SHUT		K- 131,0
	*		*		+	4	*		*	*			ICLE 72-OTS		
	*		*		k	k	*		*	*			CH CONFIGUR		
	*		*		<b>k</b>	*	*		*	*		—	TESTED IN T		
	*		*		*	4	*		*	<b>*</b>			C 8-FOOT TR		
	*		*		*	k	*		*	k		TUN*	C PRESSURE	*ON:	
	*		*		k	4	*		*	<b>k</b>		CH *	FOR THE MA	*NE(	
	*		*		ł	×	*		*	*		TO *	GE OF O.3K	*RAI	
	*		*		*	*	+		*	*		*	<b>)</b>	*1.2	
	*		*		k	· ·	*		*	*		*		*	
	N+DMC-DD-0004	K BURROWS, JOHN	*DICK	/WELL/	•ROCKWE	/	+0.010	IDCE	: TM*F	*OBTAIN VISCOUS	BITER WITH ELEV	ST *OR	TUNNEL TE	- *WI	ALSPAN
=		ROQUIN/R I.		•	CALSPA		*10.0		CTC*	*TEPACTION FEEE	AND BODY FLAP	01*DN	13 OF THE C	- *DA	BHST
( ( ( 75 ;	*JULY, 1975	E ROGERS/CALS					*16.0			ON STABILITY D	FIECTIONS	SHILKDE	CALE SPACE	/*0-9	
	<b>5</b> *						*			IVATIVES OVER		MODE*	E ORBITER M	*TT!	4113
	*			SHOCK TE			<b>不</b> 止					CVIA	1-0 IN THE	47*I	
	*	A. SARVER			*NEL					RE-ENTRY MACH			N HYPERSONI		
	*	E. VAUGHN			k	4	*			CTRUM TOGETHER			K TUNNEL (4		
	*	MS .	*-DMS		k	4	*			TH SCHLIEREN P		0-1*			
	*		*		r	×	*			OS AND PRESSUR		*	LEG)	*NCF	
	*		*		r	*	*		O E*	ATA UTILIZED TO		*		*	
	*		*		<b>,</b>	*	*		EPA*	VALUATE FLOW S		*		*	
	*		*		۲	4	*		NA *	RATION PHENOME		*		*	
														*	

	WIND TUNNEL TEST	/ DMS DATA	PROCESSING	3		203
* *	*	*	+MODEL	*	* COGNIZANT	* BASIC
TEST * * CONFIGURATIO	NS * TEST	* TYPE OF	* SCAL	E* TESTING	* TEST DMS	*PUBLICATIONS
ID * REPORT TITLE * TESTED	* PURPOSE	⋆ TEST	*MACH RANG	GE* AGENCY	* PERSONNEL	*OR COMMENTS
MSFC - *REENTRY AERODYNAM*SRB W/O HEAT S	HIETTO DETERMINE AFE	RO+FORCE	*1 95 -	*MSFC /	*J D. JOHNSON/M	SF+DMS-DR-2235
14TWT - *IC FORCES AND MOM*LD. W/HEAT SHI			*3 48	*MSFC -	*C	*NOV., 1975
/+ENTS ON THE ENGIN+ON SKIRT, W/HE			+	*14-INCH TRIS	ON*W. F BRADDOCK/	NS*
A3OF +E NOZZLE OF THE 1+SHIELD ON NOZZ			*	*IC WIND TUNN		*
R-141,810*46-INCH SOLID ROC*	*RING REENTRY	*	*	*	*V W. SPARKS	*
*KET BOOSTER NODEL*	*	*	+	*	*M M. MOSER JR.	*
*473 IN MSFC 14 X *	*	*	*	*	*-DMS	*
*14 INCH TRISONIC *	*	*	*	*	*	*
*WIND TUNNEL (SA30*	*	*	*	*	*	*
*F) *	*	*	*	*	*	*
* *	*	*	*	*	*	*
W - *MATED AERODYNAMIC*BOEING 747 MAT	ED *TO DETERMINE AIF	?L*FORCE	*O 04 /	/ *BOEING /	*R.D KNUDSEN/BCE	
SWT - *CHARACTERISTICS *WITH AN EXTERN	IAL *OADS FOR SELECTE	ED*	* 15 -	*UW -	*G	*DEC , 1975
146 /*INVESTIGATION FOR*TANK	*CONFIGURATIONS A	<b>\</b> *	* 15		ND*R W.SENDER/BOEI	
A11 *O O4-SCALE MDOEL *BOEING 747 ALO	NE *ND DETERMINE EFF	-E*	*	<b>≯TUNNEL</b>	*D A SARVER	*
R-141,835+B0EING 747 CAM/EX*	*CTIVENESS OF ET		*	*	*W B MEINDERS	*
*TERNAL TANK (MODE*	*OSITION, ET INC	ID*	*	*	*-DMS	*
+L AX1284 E-5) COM*	*ENCE, SUPPORT ST	rr*	*	*	* '	* * * * * * * * * * * * * * * * * * * *
*BINATION IN THE *	*UCTURE AND 747 \	/E *	*	*	*	* č
*UNIVERSITY OF WAS*	*RTICAL STABILIZI	IN+	*	*	*	*
*HINGTON AERONAUTI*	*G SURFACES ON ST	ΓΛΨ	+	*	*	
*CAL LABORATORY F *	*BILITY, CONTROL	<b>A</b> *	*	*	*	*
*K KIRSTEN WIND T*	*ND PERFORMANCE C	)F*	*	*	*	*
*UNNEL (CA11)	*747/ET COMBINAT	EO*	*	*	*	* *
* *	*NS	*	*	*	*	to the state of th
* *	*	*	*	*	*	* #DMC_DD_222B
CALSPAN - *RESULTS OF WIND T*51-0	*TO DETERMINE EFF	FE*FORCE		/ *ROCKWELL/	∗J J DAILEDA,	U **UIII3 -UK - 2230
8HST - *UNNEL RCS INTERAC*	*CTS OF RCS JET/F	₹L*	* <b>9</b> 60 -	*CALSPAN ~	*MARROQUIN/RI	*NOV , 1976
84-120 /*TION TESTS ON A O*	*OW FIELD INTERAC		*10 75		RS*C. E. ROGERS/CA	LS*
A93 * O10-SCALE SPACE *	*IONS ON SSV AERO		*	*ONIC SHOCK T		*
R-141,847*SHUTTLE ORBITER M*	*STABILITY AND CO		*	*NEL	+V W SPARKS	
*ODEL (51-0) IN TH*	*TROL CHARACTERIS		*	*	*V W. SPARKS	**
*E CALSPAN CORPORA*	*ICS AT VARIOUS F	-1Y *	*	*	*-DMS	*
*TION 48-INCH HYPE*	*PERSONIC MACH AN		*	*	*	*
*RSONIC SHOCK TUNN*	*REYNOLDS NUMBERS	5 *	*	*	*	<b>不</b> .i.
*E! *	*	*	*	*	*	*
4	*	*	+	*	*	*

						WIND	TUNNEL TEST	「 <b>/</b>	DMS DATA	PROCE:	SSING					20
		*		*		*		*		+MODE!	 L	*	*	COGNIZANT	* BAS	1C
TEST	Г	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBLIC	
ID		* F	REPORT TITLE	*	TESTED	*	PURPOSE		TEST			* AGENCY	*	PERSONNEL	*OR COM	
		,														
ARC	- :	+		*		*		*F	ORCE	*		*LARC /	*J.	E VAUGHN	*DMS-DR	-2239
FPT	<b>~</b> :	٠		*		*		*		*		*LARC -	*D	B. WATSON	*TO LRC	
76	1	+		*		*		*		*		*8-FOOT TRA			*	
A38B		*		*		*		*		*		*IC PRESSUR		- · · <del>-</del>	*	
		*		*		*		*		*		*NNEL	*		*	
		+		*		*		*		*		*	*		*	
EDC	_	RE:	SULTS OF AN I	NV*6	O-OTS THERMOCOUP	*T0	OBTAIN HEAT	TR*H	EAT-TRANS	S*2.5	_	*ROCKWELL/	*d.	W. CUMMINGS.	W*DMS-DR	-2240
<b>∤TA</b>			IGATION OF T				FER DATA ON			+4 5		*AEDC -		H DYE/RI	*APRIL,	
Α			CE SHUTTLE I				EGRATED VEHI	_		*		*SUPERSONIC			*	
141A			GRATED VEHICL				DURING ASCEN			*		*D TUNNEL (		M. MANN	*	
-151.	054	+AEI	RODYNAMIC HEA	TI*			FLIGHT PROFI			*		*	*-D		*	
•			CHARACTERIST			*		*		*		*	*		*	
			BTAINED USIN			*		*		•		+ '	*		*	
			0 0175-SCAL			*		*		*		*	*		*	
			EL 60-OTS IN	-		*		*		*		+	*		*	
			AEDC TUNNEL	-		*		*		*		+	*		*	
			RING TESTS IF			*		*		*		*	+		*	
			1}141A	*		*		*		*		*	*		*	
	,	<b>*</b>		*		*		*		*		*	*		*	
DC	- ;	PAN.	INVESTIGATIO	N +M	ODEL 60-3, VEH.	*TO	INVESTIGATE	FN+H	FAT-TRAM	s*0 01	75 /	*ROCKWELL/	*B	J HERRERA/R	T *DMS-DR	-2241
TB			ENTRY HEATIN				HEATING	*	-A	*8 0		*AEDC -		E. VAUGHN	*VOLUME	
A			THE 0.0175 S			*	112412110	*		*		*HYPERSONIC			*JULY,	198
39			SPACE SHUTTL			*		*		*		+D TUNNEL (			*	, 50
			SITER (MODEL			*		*		*		*	*	, m.J	*	
			IN THE AEDO			*		**		*		*	*		*	
		_	TUNNEL B	+		*		*		sk:		*	*		**	
	,	·	TOTALL D	*		•		•		*		*	*		•	
DC	_ ,	kΔN	TNVESTIGATIO	N +M	ODEL 60-3, VEH	*TO	INVESTIGATE	EVIAM.	EAT TDANS	**O O1	75 /	*ROCKWELL/	*D	J HERRERA/R	T *DMS-DD	-2241
TB			ENTRY HEATIN				HEATING	TIA .(1)	LAT TRAIN	*8 0		*AEDC -		E. VAUGHN	*VOLUME	
A			THE 0.0175 S			* 114 (	HEMITING	*		+0 U		*HYPERSONIC			*UULY.	
139			SPACE SHUTTL			*		- N		*		*D TUNNEL (			*	130
			SITER (MODEL					-T		•		TOTAL CONTRACT (	J, →~U *	ma	-r ±	
. 100,			IN THE AEDC			.π. .Ψ.		. T		r •			- ·		-r -tr	
			TUNNEL B	υr		~ •		*		*		•	*		*	
		' N I' '	I CHANCE D	4		4.						P			<b>*</b>	

						WIND	TUNNEL TEST	г /	DMS DATA	PROCES	SSING					20
						*		*		+MODEL		*	*	COGNIZANT	* BA	SIC
TEST	т Г *		*	CON	FIGURATIONS	*	TEST	*	TYPE OF			+ TESTING	*	TEST DMS	*PUBLI	
ID		REPORT TI			TESTED	*	PURPOSE		TEST			* AGENCY	*		*OR CO	
			1 LC T													
EDC	- 4	AN TAIVESTIC	ATION +	MODEL	60-3, VEH.	<b>≯</b> T∩	INVESTIGATE	FN≯H	ΕΔΤ~ΤΩΔΝ'	S+O 017	75 /	*ROCKWELL/	*B.	J HERRERA/RI	*DMS~DI	2-2241
IWTB		OF ENTRY HE					HEATING	*	EA1 (11)	*8 0		*AEDC -		E VAUGHN	*VOLUM	
4A		DN THE 0.01					HEATING	*		*		*HYPERSONIC WI	-		*JULY,	
44 H39		LE SPACE SH				+		*		4		*D TUNNEL (B)			*	
						r L		4				**	*	·10	*	
R-160,		ORBITER (MO						<u>.</u>		<u>.</u>		T	•		sk	
		-J) IN THE				*						- T	т ъ		·-	
		KF TUNNEL B	*			*		*		*		<b>本</b> 	<u>.</u>		*	
	*		*	: 		*		*		*	/	*	т п	I UEDDEDA/DI	TOME D	004
\EDC					60-3, VEH				EAT-IRAN					J. HERRERA/RI		
WTB		OF ENTRY HE				*TRY	HEATING	*		*8.0		*AEDC -		E. VAUGHN	*VOLUM	
'4A		ON THE O O1				*		*		*		*HYPERSONIC WI			*JULY,	198
H39	*	LE SPACE SH	UTTLE +			*		*		*		*D TUNNEL (B)	* - D	MS	*	
R-160,	493+	ORBITER (MO	DEL 60*			*		*		*		*	*		*	
	+	-O) IN THE	AEDC U*			*		*		*		*	*		*	
	*	KF TUNNEL B	*			*		+		+		*	*		*	
	*		*			*		*		*		*	*		*	
LEDC	- +	AERODYNAMIC	RESUL*	52-OT	S	*T0	OBTAIN DATA	WI*F	ORCE	*0 010	) /	*ROCKWELL/	×Ε.	CHEE/RI	*DMS-DI	R-2241
SWTA		TS OF A SEP			-		THE SRB IN			*4 5	-	*AEDC -	*R	BURT/ARO	*VOLUM	E 01
ASA		N EFFECTS T					ITY TO THE			*		*SUPERSONIC WIT	U*1	E VAUGHN	*MARCH	. 197
A111		A O 010-SCA					VER A LARGE			*		*D TUNNEL (A)		M MOSER JR	*	
		DEL (52-0TS					INITIAL ANG			*		*	*-D		*	
K-141,	•	HE INTEGRAT	,				ATTACK AND			*		*	*		*	
						*ESL		4		*		*	*		*	
		IN THE AEDC				*E3F	17	4.		-		4	·		*	
		40-BY-40 IN				*		τ 		т ш		T.			*	
		ERSONIC WIN				*				**		*	<b>T</b>		т ъ	
		EL A (IA111	) *			*		*		*		ar 			*	
	*		*	•		*		*		*		*	*	over/pt	TOME D	
\EDC		AFRODYNAMIC			S		OBTAIN DATA		ORCE	*0 010	•	*ROCKWELL/		CHEE/RI	*DMS-DI	
SWTA	~ *	TS OF A SEP	ARATIO*	•			THE SRB IN F			*4 5		*AEDC -		BURT/ARO	*VOLUMI	
AE	/*	N EFFECTS T	EST ON*			*XIM	ITY TO THE (	J/E*		*		*SUPERSONIC WI			*MARCH	, 197
A111	*	A O 010-SCA	LE MO *			*T 0	VER A LARGE	01*		*		*D TUNNEL (A)	*M	M MOSER JR.	*	
		DEL (52-DTS				*ET	INITIAL ANGI	LE *		*		*	*-D	MS	*	
•	•	HE INTEGRAT	•			*OF	ATTACK AND S	SID*		*		*	*		*	
		IN THE AEDC				+ESL	IP .	*		*		*	*		*	
		40-BY-40 IN	-			*		*		*		+	*		*	
		ERSONIC WIN				*		*		*		*	*		*	
		EL A (IA111				*		*		*		*	*		*	
	4	CC A (IAIII	•									4.			•	

								WIND	TUNNEL T	EST /	DMS	DATA	PROCES	SSING							20
	*	k			*			*			*	~~	*MODEL	 L	*		*	COGNIZANT	*	BASI	 :
TEST	*	k			*	CON	FIGURATIONS	*	TEST		* TY	PE OF	*	SCALE	* TESTI	NG	*	TEST DMS	*PUI	BLICA	TON
ID	*	k RE	PORT	TITLE	*		TESTED	* ·	PURPOSE		* T	EST	*MACH	RANGE:	* AGENCY	Y ~~	*	PERSONNEL	*0R	COMMI	ENTS
C	- 4	kDF SI	11 TS 1	DE AN	V E D * V	MODEL	48-0/AX1318	******	E AND MO	MENT	+ F0D0	t:	* 0 0	10= / .	+ROCKWELI	. /	<b>4</b> 1	F MARIOURI	+011	c	2040
							0125 SCALE					C	*03		*ARC			E. VAUGHN H. LINDAHL		S-DR-2	
o '''.				A SPA		1 0	UIZS SCALE		R THE CA				*0 3		*486 *14-FOOT				*UAI	Ν,	197
23A				ORBITE					ORBITER				*		*NIC WIND			3	*		
				ER VEH					LY AND M				<b>-</b>		*[ *IATO MINI	ט ווטואוט ו	¥		Ĩ.		
14.				JRATIO					PRE-LAUN				4	,	~ L.		~ •		*		
				ISH A I					EE AIR D				*	,	T L		~ •		- -		
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				r SEPA	_				ATION TE				4	,			~ •		<u>.</u>		
				STIGAT					E CARRIE				*	,	<del>-</del>		*		- T		
				ING A					IGURATIO		*		*		 		•		*		
				E MODEL			_	*	10011111		*		*	,	*		*		*		
				3181-1			•	*			*		*	,	*		*		*		
				: 14-FC				*			*		*		*		*		*		
	*	WIND	TUN	VEL (CA	12 *			*			*		*	,	*		*		*		
	*	(AE		•	*			*			*		*	:	*		*		*		
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С	<b>~</b> *	AN I	NVES1	TIGATIO	)N * 1	46-I	NCH WITH AND	*TO 0	BTAIN ST	ATIC	*PRES	SURE	*.40	- :	*MSFC	1	*W	F. BRADDOCK.	G*DM	s-pr-:	2244
WT							UT PROTUBER						* 45		*MSFC			STREBY/NSI			
				RESSURE					S FOR TH				*	:	*14-INCH			•	*		
8F	*	ISTR	IBUT	ON OF	TH*			*AT R	EENTRY A	TTIT	*		*					M MOSER JR	*		
151,0	382*	E O	00548	SCALE	E 5*			*UDES	AND FLI	GHT C	*		*	,	*		* - DM	IS	*		
	*	PACE	SHUT	TTLE SC	)L1*			*ONDI	TIONS		*		*	:	*		*		*		S
	*	D RO	CKET	BOOSTE	ER *			*			*		*	:	*		*		*		277
	*	(MSF	C MOD	DEL NUM	∕IBE*			*			*		*	:	*		*		*		è
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	NUT DNIW	EL TEST /	DMS DATA PR	OCESSING				207
* * * CONFIGURATION  ID * REPORT TITLE * TESTED		* EST * POSE +	TYPE OF *	ODEL + SCALE+ ACH RANGE*	TESTING *	COGNIZANT TEST DMS PERSONNEL	* BASIC *PUBLICATI *OR COMMEN	
ARC - *RESULTS OF AN INV*SPACE SHUTTLE  11,97,87- *ESTIGATION TO DET*ICLE ORBITER 1  094	40A*L TOTAL  *C PRESSL *NMENTS F  *R DATA F  *TIONS AN  *E EFFECT  *F ALTERN  *T TEST F  *IGURATIO  *  *  *  *  VEH*TO DETEF  40A*L TOTAL  *C PRESSL *NMENTS F  *TIONS AN  *E EFFECT  *F ALTERN	AND STATI* RE ENVIRO* OR THE AI* ROBE LOCA* DO RELATIV* IVENESS O* IATE FLIGH* ROBE CONF* INS  MINE LOCA* AND STATI* IRE ENVIRO* OR THE AI* ROBE LOCA* IVENESS O* IXENESS OF	*0 *3 * * * * * * * * * * * * * * * * *	**************************************	ARC  11-FOOT, 9-FOOT  TARY WIND TUNN  EL  ROCKWELL/  ARC  11-FOOT, 9-FOOT  TARY WIND TUNN  EL	*W. B. MEINDERS  *-DMS  * * * * * * * * * * * * * * * * * *	*VOLUME 01 ARC*SEPT., 1  *  *  *  *  *  *  *  *  *  *  *  *  *	976 976 ORIGINAL 976 ORIGINAL

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	*			*		*		*	· ·	*MODE!		*		*	COGNIZANT	*	BASIC	
TEST	*			* (	CONFIGURATIONS	*	TEST	*	TYPE OF		SCALE	* TE:	STING		EST DMS		BLICATI	ักม
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE				PERSONNEL		COMMEN	
(C	الدية	OM CHEC	ONITO AFE		10 DODY 117711 111													
	- *L	UW SUBSI	ONIC AER	(O*MTV	G-BODY WITH VA					* 08		*LARC	/		GE WARE/NASA	\ *DM	S-DR-22	46
6			CHARACTE F FIVE I				V FORCE +			* 30		*ARC	-	*LANG			LY, †	97
65			PLANFORM				CHARACTERI			*					ARD SPENCER/	′N*		
			TH SYSTE				A FUNCTI	ON O*		*		*RE TI	JNNEL		LANGLEY	*		
- 144,0			VARYING			*F R	1/L	*		*		*			WATSON	*		
			VARTING LET GEOM	•		*		*		*	1	*		*-DMS		*		
			ED IN TH			*		*		*	:	*		*		*		
			S 12-FO			*		*		*	:	*		*		*		
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Δ.	- ^G:	DEONIA I	JN UP HI	L * 11. T	ED VEH. 4 ORB.	*RSU	ATC ATSCOO	S IN*		*19		*AEDC			. VAUGHN	*JAI	V, 1	97
160	/ * E1	KSUNIC 1	V12C002	1*(82	6 C9 E26 F7 M	*TER	CTION EFF	ECTS*		*19			RVELOCITY			*		
	714 744C	I ERACTI	JN EFFEC	T*7 N	128 R5 V8 W116)	*		*		*	• :	*WIND	TUNNEL (	F*		*		
- 141,0			SPACE S			*		*		*	,	*)		*		*		
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			1/ SCALE			*		*		*	:	*		*		*		
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· ·	- *R	ESULTS (	OF HEAT	T*60	OTS SPACE SHUT					IS*0.017	75 / :	*ROCK!	WELL/	∗W H	. DYE/RI	*DM:	S-DR-22	48
					VEHICLE 5	*AMIC	INTERFER	ENCE*		*5 2	- :	*ARC	-	*W K	. LOCKMAN/AR	C*API	RIL, 1	97
			SCALE S				ING DATA			*5 3	:	*3.5-1	FOOT HYPE	R*R B	LOWE	*		¥
48			LLE AEHI				EXTERNAL			*	,	*SONI	WIND TU	N*-DMS		*		OF POOR
-144,59			L (60-0				HE TANK A			*	,	+NEL		*		*		POOR
		•	NASA-A			*, SE	COND-, AN	D FI*		*	:	*		*		*		Ş
			RCH CENT				STAGE CON	FIGU*		*	:	*		*		*		4
			T HYPER			*RATI	ONS	*		*	;	+		*		*		100
			TUNNEL	*		*		*		*	1	*		*		*		ď
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							WIND	TUNNEL '	FEST /		OMS DATA	PROCES	SSING		•				209
	 *						*			*		*MODE	 !	*		- <del></del> -	COGNIZANT	* BAS	SIC
TEST	*			*	CON	FIGURATIO	ONS *	TEST		*	TYPE OF			* TESTI	NG *	·	TEST DMS	*PUBLI	CATION
ID	*	REPO	RT TITLE	· *	00.1	TESTED	*	PURPOSI			TEST			* AGENO		٠	PERSONNEL	*aR coi	MMENTS
BHST	- *	SHUTTLI	E HEAT	TRAN*L	E OR	SPACE	TERN*HIG	H MACH N	JMBERS	*	EAT-TRANS	5* 01 * 5 ! * 24 (	5-	*CALSPAN	.L/	C E	R. BRUES+LE/R WITTLIFF/C		
HST			SCALE 1			NK- UI:		ING RATES				*					E VAUGHN	*	
33			T) IN				*HE	ORBITER/	TANK I	*		*		*NEL	*	4 <i>-DN</i>	AS	*	
			W HYPERS				*NTE	RFACE ANI	SUPP	*		+		*96~INCH	HYPERS*	k		*	
,			< TUNNEL					STRUCTU				*		*ONIC SH	OCK TUN	•		*	
		EST IH		*			*(2)	THE HEAT	ING E	*		*		*NEL	*	ŧ.		*	
	*		7	*				CT OF A S				*		*	*	•		*	
	*			*			*NOS	E CAP ON	THE E	*		*		*	*	k		*	
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	*			4			*SEC	TION.		*		*		*	×	r		*	
	*			*			*			*		+		*	*	•		*	
С	- *	RESULT:	S OF CO	VEC* 1	5-0.	FLAT PLAT	TE M*TO	INVESTIG	ATE AE	*H5	AT-TRANS	*1 O	/	*ROCKWEL	.L/ +	· M	QUAN/RI	*DMS-Di	2256
5HWT			EATING					YNAMIC H				*5 1	-	*ARC	- 1	×₩	K LOCKMAN/A	RC*JULY,	197
2	/*	S OF A	LONGITU	JDIN*			*RAT	ES IN TP	SGAP	*		*5 1		*3 5-F00	IT HYPER*	M	M MOSER JR	*	
43	. *	AL GAP	ON THE	ROC*			*5 A	T VARIOUS	S DEPT	*		*		*SONIC W	/IND TUN∗	-DN	1S	*	
-141.			LAT PLA				*HS,	WIDTHS,	LENGT	*		*		*NEL	*	•		*	
	*	MODEL	(15-0, )	INSE*			*HS,	AND ORI	ENTATI	*		*		*	×	k		*	
	*	RT VII	) IN TH	E NA*			*ONS	TO THE I	FLOW	*		*		*	*	•		*	
	*	SA/AME!	5 3 5 FC	* TOC			*			*		*		*	*	t		*	
	*	HYPERSO	ONIC WIN	ND T∗			*			*		*		*	*	•		*	
	*	UNNEL	(TEST OF	443)*			*			*		*		*	*	*		*	
	*			*			*			*		*		*	k	k	_	*	
DC			S OF TES OCKWELL			29-0/VL		DETERMINI Y LAYER (			EAT-TRANS	*8.0 *8.0		*ROCKWEL *AEDC			QUAN/RI MARTINDALE/A	*DMS-DI	
TB					16139			ISTICS O				.00					A SARVER	*	, , ,
353			DNAL SPA					ER SURFA				* -		*D TUNNE			WATSON	*	
9			E ORBIT	•				ORBITER	CE UF	<u>.</u>		T		*		-DI		*	
-141,			ONF I GUR				* 410	OKDIICK		Ψ.		-T				יוט	15	*	
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			VO. 29-0	•			* *			*		*		*	4	¢		*	
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			<b></b> -			WIND	TUNNEL TE	ST /	DMS D	ATA	PROCES	SING						2
	*		*			*		*			*MODEL		*	*	CO	GNIZANT	*	BASIC
TEST	*		*	CONFI	GURATIONS	*	TEST	*	TYPE	OF	*	SCALE	* TESTING	*	TES	T DMS	*PUB	LICATION
ID	*	REPORT TITLE	*	Т	ESTED	*	PURPOSE	+	TES	T	*MACH	RANGE	* AGENCY	*	PE	RSONNEL	*0R	COMMENTS
DC -	*1	EAT TRANSFER	DHV +U	DR • 4	O( SEMISOA	*TO 1	MVECTICATI	- 01 4	LICAT_T	DANIC	*** 047	·= /	ADDONNELL /	4.14		DYE/RI	+046	-DR-2252
TB -	* 5	SE CHANGE PAIN	FIIA TO	· Banv	ELLICH: LE	* V VIEL	INVESTIGATI	: PL1	'DEAL"I		*8 O							
		STS OF 0.0175									*8 O		*AEDC -			SARVER	*JUŁ	Y, 197
25A		LE MODELS (NO									-		*HYPERSONIC WI			MUSER UK.	<b>*</b>	
		21-0 AND 46-0)		ON, SEM							*		*D TUNNEL (B)	*-DI	ИΣ		*	
141,54		THE ROCKWELL I					BITER CON				*		*	*			*	
							ONS TO SET				*		*	*			*	
		ERNATIONAL SPA					TIMUM MODI				*		*	*			*	
		SHUTTLE ORBITE					OR LATER				*		*	*			*	
		I THE AEDC TUN	– –			_	AMINING S				*		*	*			*	
		HYPERSONIC W					G LEADING				*		*	*			*	
		TUNNEL (TEST					ITERFERENCI	-			*		+	*			*	
	4.2	25A)	*			*FECT	5.	*	•		*		*	*			*	
	*		*			*		*			*		*	*			*	
		N INVESTIGATI		7-0, 7			VALUATE M	_			*0.004	•	*ROCKWELL/			SPARKS		S-DR-225
		N THE MSFC TN					ELEVON FL				*0 6		*MSFC -	*-D	MS		*JAN	l, 19 [.]
		DETERMINE SP					OR (USED /				*2.74		*14-INCH TRISO				*	
125		R EFFECTS ON					LER) EFFE				*		*IC WIND TUNNE	L*			*	
-144,83		LOADS AND EL				*0N W	ING BENDI	\G/T*	•		*		+	*			*	
	*/	N HINGE MOMENT	S U*			*ORSI	ON AND ELI	EVON+	•		*		*	*			*	
		TLIZING 0.004				*HING	E MOMENTS	DU *	ť		*		*	*			*	
	*Δ	LE MODELS (77	~O *			*RING	LAUNCH	*	t		*		+	*			*	
	<b>∗</b> A	ND 74-0TS) OF	TH*			*		*	•		*		*	*			*	
	+E	SHUTTLE VEHI	CLE*			+		4	•		*		*	*			*	
	*5	CONFIGURATIO	N *			*		*	•		+		*	+			*	
	*		*			*		+	ť		*		*	*			*	
c -	* T	ERMINAL AREA	ENE*V	EHICLE	5 ORBITER	*TO 0	BTAIN PRES	SSUR+	FORCE		*0 030	) /	*ROCKWELL/	*P.	J HA	WTHORNE/	RI*DMS	-DR-2254
		GY MANAGEMENT					STRIBUTION			RE	*0 6	- '	+ARC -	*		ŕ	*VOL	.UME 01
3	/*G	SIME INVESTIGA	TIO*				CLE FORCES				<b>*14</b>		*11-FOOT TRANS	0*S	LTR	EON/	∗JÜL	Y. 191
148	*1	IS UTILIZING A	N 0*				MENTS. ELE				*		*NIC WIND TUNN				*	
148P	*.	030-SCALE MOD	EL *				RUDDER HIN				*			*-D			*	_
-144.61		47-0) OF THE					NTS, BODY				*		*	*			*	2
		E SHUTTLE VEH					ND ELEVON				*		*	*			*	7
		ORBITER CONF					N THE TERM				*		*	*			*	-
		RATION 140A/B/				-	EA ENERGY				*		*	*			*	7007
		N THE AMES RE	•			-	ENT (TAEM				*		*	*			*	
		RCH CENTER 11					PROACH OF				*		*	*			*	7
		1 FOOT TRANSO				*GHT		*			*		*	*			*	
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						WIN	TUNNEL TEST	/	DMS DATA	PROCES	SSING							211
		_ =		 *		*		*		+MODEL		*	*		COGNIZANT	*	BAS	IC
TEST	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE:	* TESTIN	G *		TEST DMS	* P	UBLIC	<b>ENDITA</b>
ID		REPORT	TITLE	· *	TESTED	*	PURPOSE		TEST		RANGE	* AGENCY	*		PERSONNEL	*0	R COM	MENTS
RC	- *T	ERMINAL	AREA	ENE+V	EHICLE 5 ORBITE	2*70	OBTAIN PRESS	JR*F	ORCE	*0.030		*ROCKWELL	•		J HAWTHORNE/			
1TWT	- *R	GY MANAG	GEMENT	RE*		*E. (	SISTRIBUTIONS	, *P	RESSURE	*0.6		*ARC		•			OLUME	
3	/*G	IME INV	ESTIGA	*OITA		*VEI	HICLE FORCES A	٩N۴		*14					TREON/	* დ	JULY,	197
148	*N	S UTILIZ	ZING A	*O NA		*D 1	MOMENTS, ELEV	*NC		*					B. MEINDERS	*		
148P	*.	030-SCAI	LE MOD	DEL +		*ANI	RUDDER HING	Ε *		*	,	∗Ł (UNITA	RY) *	-D1	AS .	*		
- 144 .	620*(	47-0) 01	F THE	SPA*		*M0!	MENTS, BODY F	<u>*</u>		*	:	*	*			*		
		E SHUTTI				*AP	AND ELEVON LI	*AC		*		+	*			*		
	_	ORBITE				*DS	IN THE TERMIN	YAY		*		*	*			*		
		ATION 14				* L. /	AREA ENERGY MA	AN*		*	:	*	*			*		
		N THE A					MENT (TAEM)			*	-	*	*			*		
	_	RCH CEN	_				PPROACH OF FI			*	3	*	*			*		
		1 FOOT				*GH		*		*		*	*			*		
		IND TUN				*		*		*		*	*			*		
		8)	1466 (6	уд ( — — — — — — — — — — — — — — — — — —		*		*		*	;	*	*			*		
	*	67		.,		*		*		*	2	*	*			*		
С		COMTNAI	ADEA	ENET	EHICLE 5 ORBITE	o. Dr¥C	ORTAIN PRESS	ID+F	ORCE	*0 030	) / ;	*ROCKWELŁ	/ *	Pι	J.HAWTHORNE/	RI*D	MS-DR	-2254
TWT		GY MANA			TENTICLE 5 CREATE		DISTRIBUTIONS			*0 6	•		· *		•		OLUME	
3		IME INVI					ICLE FORCES	•	112330112	*14			TRANSO*	s L	. TREON/	*.	JULY.	197
-							MOMENTS. ELEV			*					B MEINDERS	*		
148		S UTILI:					RUDDER HING			*		+L (UNITA		-DN		*		
148P		030-SCA					MENTS, BODY FI						*			*		
-144,6		47-0) 0								т т		r 				*		
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					WIND TU	JNNEL TES	T / DMS D	ATA PRO	CES!	SING						2
		*	*		*		*	*MC	DEL	*		*	COGNIZANT	*	BASI	c .
TEST		*	*	CONFIGURATIONS	*	TEST	* TYPE	OF *		SCALE*	TESTING	*	TEST DMS		JBLICA	
ID		* REPORT T	ITLE *	TESTED	* [	PURPOSE	* TES	*MA	CH I	RANGE*		*	PERSONNEL		COMM	
3	_	PTEDMINAL A	DEA ENGLA	MILITALE E OPPITE								_				
WT	_	*RGY MANAGE	MENT DES	VEHICLE 5 ORBITER					030	•	ROCKWELL/		J HAWTHORNE/			
•••		GIME INVES					s, *PRESSU		6 .		ARC -	*_			LUME	
48		NS UTILIZI				LE FORCES		*1	4		11-FOOT TRANS			+AU	JGUST,	19
48P		*.030-SCALE				ENTS, ELEY		*			NIC WIND TUNN			*		
		*(47-0) OF				JDDER HING		*		*	L (UNITARY)	*-DI	MS	*		
144,0						rs, BODY I	_	*		*		*		*		
		*CE SHUTTLE				D ELEVON I		*		*		*		*		
		E ORBITER				THE TERM		*		*		*		*		
		RATION 140				A ENERGY I		*		*		*		*		
		IN THE AME				VT (TAEM)		*		*		*		*		
		ARCH CENTE				ROACH OF F	FLI*	*		*		*		*		
		×11 FOOT TR			*GHT		*	*		*		*		*		
		WIND TUNNE	L (OA1 *	•	*		*	*		*		*		**		
	1	<b>∗48</b> )	+		*		*	*		*		*		*		
	3	k	*		*		*	*		*		*		*		
	- :	FTERMINAL A	REA ENE*\	EHICLE 5 ORBITER	R*TO OBT	TAIN PRESS	SUR*FORCE	*0	030	/ +	ROCKWELL/	*P	J.HAWTHORNE/	RI*DN	IS-DR-	225
WT		RGY MANAGE	MENT RE*				. *PRESSU	RE +O	6 .		ARC -	*	,		LUME	
		GIME INVES			*VEHICL	E FORCES	AN*	* 1	4	*	11-FOOT TRANS	0 * S	L.TREON/		JGUST,	
48	;	NS UTILIZI	NG AN O*		*D MOME	NTS, ELEV	/0N*	*			NIC WIND TUNN			*	,	
48P		.030-SCALE			*AND RU	JDDER HING	3E *	*			L (UNITARY)	*-D		*		
144,E	623	(47-0) OF	THE SPA+		*MOMENT	rs. BODY F	=L *	*		*	_ (,	*		*		
		CE SHUTTLE				ELEVON L		*		*		*		*		
	,	E ORBITER	CONFIGU*			THE TERMI		*				*		···		
	,	RATION 140	A/B/C/R*			NENERGY N		*								
		IN THE AME				T (TAEM)		*		•				- -		
		ARCH CENTE				ROACH OF F						Ţ		±		_
		11 FOOT TR			*GHT	CONCIL OI I	· CI ··	-		- T		<u> </u>		<u>.</u>		9
		WIND TUNNE			GFT1		<b>.</b>	<b>*</b>						*		Ē
		48)	_ (04) *		•		- T	*		**		<b>26</b> 5		**		-
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						WIND	TUNNEL TEST	1	DMS DATA	PROCE	SSING						213
	 *			*		*		*		*MODE!	 L	*		*	COGNIZANT	* E	BASIC
TEST	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF				TESTING	*	TEST DMS	*PUB!	LICATIONS
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	+MACH	RANG	F* .	AGENCY	*	PERSONNEL	*OR (	COMMENTS
											· /	*50	OKWEL (	40	J HAWTHORNE/	DI+DMC.	-DD-2254
ARG					EHICLE 5 ORBITE					+0 03	-	*AR	CKWELL/	*	O HAWTHORNE/		JME 06
11TWT			GEMENT RE				ISTRIBUTIONS,	•	RESSURE	*0 6 *1 4	-		-FOOT TRAN		I TREON/		JST. 1976
073			ESTIGATIO				ICLE FORCES A								B MEINDERS		331, 1370
OA 148			ZING AN C				DMENTS, ELEVO			*			(UNITARY)		DMS	•	
0A148P			FE WODEF				RUDDER HINGE			*		7 L *	(UNLIART)	φ-1	כויוט	*	
CR-144,			F THE SPA				ENTS, BODY FL			*		4		- T		·	
			LE AEHICL				AND ELEVON LO			*		-		<b>-</b>		<b>1 3 3 3 3 3 3 3 3 3 3</b>	
			R CONFIGU				IN THE TERMIN			*				- L		τ •	
			40A/B/C/R				REA ENERGY MA			* 		*		Ĵ		*	
			MES RESE				MENT (TAEM) /			-t-				T 1			
			TER 11 X				PPROACH OF FL	-L		т Т		,		 		*	
			TRANSONIC			*GHT		**		-T		Ť				*	
			NEL (OA1	*		*		-# -h		<u>.</u>		1				•	
		18)		*		*		*				<u>.</u>		*		•	
	*			*		*		*	oper	***	~ /	* 00	CKWELL/	*P	J HAWTHORNE/	DI*DMS.	-DD-2254
ARC					EHICLE 5 ORBITE					*0 03		*AR		*	O TIMETHORITE		JME 07
11TWT			GEMENT RE				ISTRIBUTIONS,		KESSUKE	*1 4	_		FOOT TRAN		1 TOROM/		JST. 1976
073	•		ESTIGATIO				ICLE FORCES A			* 1 4 *					B MEINDERS		331, 13.0
OA 148			ZING AN C				DMENTS, ELEVO RUDDER HINGO			Ĵ			(UNITARY)		DMS	*	
DA 148P			re woder				ENTS. BODY FI			T		*	(ONLIANI)	*	DI-13	*	
CR-144,			F THE SPA				AND ELEVON LO							*		*	
			LE VEHICL				IN THE TERMIN			7 \$		*				*	
			R CONFIGU				REA ENERGY MA			- -		*		*		*	
			40A/B/C/R			_	MENT (TAEM) /			*				*		*	~ ~
			MES RESE				MEINT (TAEM) / PPROACH OF FL			-				*		*	유 유
			TER 11 X			*GHT	PPRUACH OF FI	*		ű.		*		*		*	
			TRANSONIC			*GF1		<b>.</b>		*		sk .		*		*	_0 ≅
			NEL (OA1	*		Ť		•		*		*		*		*	22
		18)		*		*		, ,		*		*		*		*	OOR
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	WIND TUNNEL TEST / DMS	DATA PROCESSING	- · · · · · -	214
* * TEST * * CONFIGURAT ID * REPORT TITLE * TESTED		*MODEL * E OF * SCALE* TESTING ST *MACH RANGE* AGENCY	* COGNIZANT * TEST DMS * PERSONNEL	*PUBLICATIONS
ARC - *TERMINAL AREA ENE*VEHICLE 5 OR  11TWT - *RGY MANAGEMENT RE*  073  /*GIME INVESTIGATIO+  0A148 *NS UTILIZING AN O*  0A148P *.030-SCALE MODEL *  CR-144,626*(47-0) OF THE SPA*  *CE SHUTTLE VEHICL*  *E ORBITER CONFIGU*  *RATION 140A/B/C/R*  *IN THE AMES RESE *  *ARCH CENTER 11 X *  *11 FOOT TRANSONIC*  *WIND TUNNEL (0A1 *  *448) *	RBITER*TO OBTAIN PRESSUR*FORCE  *E DISTRIBUTIONS, *PRESSI  *VEHICLE FORCES AN*  *D MOMENTS, ELEVON*  *AND PUDDER HINGE *  *MOMENTS, BODY FL *  *AP AND ELEVON LOA*  *DS IN THE TERMINA*  *L AREA ENERGY MAN*  *AGEMENT (TAEM) AN*  *D APPROACH OF FLI*  *GHT  *  *	JRE *0 6 - *ARC - *1.4 *11-FOOT TRA	* . NSO*S.L TREON/ NNE*W B. MEINDER	E/ RI*DMS-DR-2254
** ARC - *TERMINAL AREA ENE*VEHICLE 5 OR 11TWT - *RGY MANAGEMENT RE* 073	* RBITER*TO OBTAIN PRESSUR*FORCE  +E DISTRIBUTIONS, *PRESSI  +VEHICLE FORCES AN*  *D MOMENTS, ELEVON*  *AND RUDDER HINGE *  *MOMENTS, BODY FL *  *AP AND ELEVON LOA*  *DS IN THE TERMINA*  *L AREA ENERGY MAN*  *AGEMENT (TAEM) AN*  *D APPROACH OF FLI*  *  *  *  *  *  *  *  *  *  *  *  *	*1 4	* NSO*S.L TREON/ NNE*W. B MEINDER	ORIGINAL OF POOR
т ж	* *	* *	*	Y QUALITY

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	WIND 1	TUNNEL TEST /	DMS DATA	PROCESSING				215
* * * * C ID * REPORT TITLE *	ONFIGURATIONS * TESTED *		TYPE OF	*MODEL * SCALE *MACH RANGE	* E* TESTING E* AGENCY	* COGNIZANT * TEST DMS * PERSONNEL	* BASI *PUBLICA *OR COMM	TIONS
ARC - *TERMINAL AREA ENE*VEH  11TWT - *RGY MANAGEMENT RE*  073	*E DIS *VEHIC *D MON *AND F *MOMEN *AP AN *DS IN *L ARE *AGEME *D APF *GHT * * *ICLE 5 ORBITER*TO OE *E DIS *VEHIC *D MON *AND F *MOMEN *AP AN *DS IN *L ARE *AGEME *AGEME *AGEME *AGEME *AGEME *AGEME *AGEME *AGEME *AGEME	STRIBUTIONS, *P CLE FORCES AN* MENTS, ELEVON* MENTS, BODY FL * NTS, BODY FL * ND ELEVON LOA* N THE TERMINA* EA ENERGY MAN* ENT (TAEM) AN* PROACH OF FLI* * *	DRCE RESSURE	*0 6 -	*ARC - *11-FOOT TRANSC *NIC WIND TUNNE *L (UNITARY)  *  *  *  *  *  *  *  *ROCKWELL/ +ARC - *11-FOOT TRANSC *NIC WIND TUNNE	*W. B. MEINDERS *-DMS * * * * * * * * * * * * * * * * * * *	*VOLUME *SEPT , * * * * * * * * * *	10 1976 2254

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			<b></b>			WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING		_			21
		k		*		*		*		*MODEL		*	*	COGNIZANT	* BAS	IC
TEST	5	k		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLIC	ATION
ID		REPO	RT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COM	MENTS
RC					EHICLE 5 ORBITER					*0 030		*ROCKWELL/		.J.HAWTHORNE/		
1TWT			NAGEMENT R				ISTRIBUTIONS		RESSURE			*ARC -	*	_	*VOLUME	
73	1.	GIME I	NVESTIGATI	0*			ICLE FORCES			*14		*11-FOOT TE			*SEPT ,	1976
A 148			LIZING AN	_		*D M	OMENTS, ELEV	0N*		*				. B MEINDERS	*	
A 148P			CALE MODEL			*AND	RUDDER HING	E *		*		*L (UNITAR)	/)     *-	DMS	*	
R-147,6	602 [,]	r(47-0)	OF THE SP	Α*		*MQM	ENTS, BODY F	<b>Ł</b> ∗		*		*	*		*	
	•	CE SHU	TTLE VEHIC	<b>L</b> *		*AP	AND ELEVON L	0A*		*		*	*		*	
	,	FE ORBI	TER CONFIG	U*		*DS	IN THE TERMI	NA *		*		*	*		*	
	,	RATION	140A/B/C/	₽*		*L A	REA ENERGY M.	AN*		*		*	*		*	
	4	IN THE	AMES RESE	*		*AGE	MENT (TAEM) .	AN*		*		* '	*		*	
	*	ARCH C	ENTER 11 X	*		*D A	PPROACH OF F	LI*		*		*	*		*	
	4	11 FOO	T TRANSONI	C*		*GHT		*		*		*	*		*	
	*	WIND TO	UNNEL (DA1	*		*		*		+		*	*		*	
		48)	,	*	•	*		*		*		+	*		*	
	*	•		*		*		*		*		*	*		*	
RC	- 4	TERMIN	AL AREA EN	E*VI	HICLE 5 ORBITER	R+TD	DBTAIN PRESS	UR*F	ORCE	*0 030	0 /	*ROCKWELL/	*P	J.HAWTHORNE/	RI*DMS-DR	-2254
1TWT	- *	RGY MAI	NAGEMENT R	E*		*E D	ISTRIBUTIONS	. *P	RESSURE	*0 6	-	*ARC -	*		*VOLUME	13
73	_		NVESTIGATI				ICLE FORCES			*† 4		*11-FOOT T			*SEPT .	197
4148	٠,	NS UTI	LIZING AN	0*			DMENTS, ELEV			*		*NIC WIND	TUNNE*W	B MEINDERS	*	
A 148P			CALE MODEL				RUDDER HING			*		*L (UNITAR'		DMS	*	
R-147.6		_	OF THE SP				ENTS. BODY F			*		*	*		*	
			TTLE VEHIC				AND ELEVON L			*		*	*		*	
			TER CONFIG				IN THE TERMI			*		*	*		*	
			140A/B/C/				REA ENERGY M			*		*	*		*	
			AMES RESE				MENT (TAEM)			*		*	*		*	
			ENTER 11 X				PPROACH OF F			*		 	alr.		*	
			T TRANSONI			*GHT	T NOMOTI OF T	*				*	*		*	
			UNNEL (DA1			* (4) (1)		*		*		*	*		*	
		48)	ONNEE (OA)									·.			*	
		+0 <i>)</i>				4		*		ar sk		*	*		*	
RC			CDADUS OF	V + C I	ERIES-BURN. PARA	*TD	THENTIEV AND	1 4 5	nper	*4 O	,	*ARC /	*.	J B. DODS.JR.	D*DMS-DD	-2255
1TWT					LEL-BURN, 2 CANO				OKCL		- '	*ARC -		D HANLY, J		197
7SWT					CONFIGURATIONS					*1.4		*11-FOOT TI			*	
M-X			DNFIGURATI		ODNI IGORATICIA	*LEN				· 1 ·		*NIC WIND		•	*	
9-7 32,444			MACH NUMBE			- CEIV	<i>.</i>	*		*		*L (UNITAR		1. M MOSER JR	*	
, ~~4			O.8 TO 1			~ •		*		•		*9~FOOT BY			*	
		O FRUM	0.0 10 1			4						*OT SUPERSI		D.11.0	*	
				-7 -4-		*		<u>.</u>		-7 - <b>L</b>					*	
				**		<i>*</i> •		*		*		*WIND TUNN	-		T.	
	,			*		*		*		τ.		*NITARY)	*		T	
												•	*			

			WIND TUNNEL	TEST / DMS DA	TA PROCESSIN	G			217	
TES			* RATIONS + TEST TED + PURPOS			* LE* TESTING GE* AGENCY	* T	COGNIZANT EST DMS PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS	
LARC 8TPT 714 LA69 CR-151	- *REDUCTION IN /*IGATION ON A *10-SCALE MOD .369*THE SPACE SH *VEHICLE (72- *LAUNCH CONFI *TION TESTED *E LARC 8-FOD *NSONIC PRESS *UNNEL FOR TH *H RANGE OF C	VVEST *ODEL 72-0 AN O O* DEL OF* HUTTLE* -OTS) * IGURA * IN TH* DT TRA* SURE T* HE MAC*	D LINE M*DETERMINE { TS *OF VARIOUS *G COMPONEN *TOTAL DRAG * 5 PRIMAF *NTION ON DE *UCTION FOR *MODS TO ORE *OMS PODS * * *	CONFI * NTS ON * OF VEH* RY ATTE* RAG RED* ET AND*	*0 010 * 0 35- * 1 20 * * * * * * *	/ +LARC / *LARC - *8-FOOT TRANS *IC PRESSURE *NNEL * * * * * * * * * * *	*G M DN∗J. E	WARE/LARC VAUGHN	*DMS-DR-2257 *SEPT , 1977 * * * * * * * * * * * * *	
ARC 11TWT 072 IA72 CR-151	- *A O O2O-SCAT /*T PLUME MODE	LE JE */OMS PODS EL (88*D AIR MPS E ROCK*PLUME SIM ATIONA* D SSV * ON 14D* O IN T* FRANSO*	*  * DIFIED W*TO DETERMIN AND COL*AND VERTICA AND SRB*L ROOT BENI ULATION *MENTS, RUDI *ELEVON HIN *NTS, NOZZLI *L MOMENTS, *RFACE PRESS *OFILES ON *ITER, ET, S	AL TAI * DING MO* DER AND* GE MOME* E GIMBA* AND SU* SURE PR* THE ORB* SRB; TO* ET BAS *	* * * *0.020 *0 90 - *1 40 * * * * *	* / *ROCKWELL/ *ARC - *11-FOOT TRAN *NIC WIND TUN *L (UNITARY) * * * * * * *	*-DMS \$0*	I LINDAHL	* *DMS-DR-2258 *VOLUME O1 *APRIL. 1977 * * * * * * * *	ORIGINAL PAGE OF POOR QUALI
ARC 11TWT 072 IA72 CR-151	- +A O O2O-SCAL /*T PLUME MODE	LE JE */OMS PODS EL (88*D AIR MPS E ROCK*PLUME SIM ATIONA+ D SSV * DN 14D* ) IN T+ FRANSO*	*E COOLING N  *TO DETERMIN  AND COL*AND VERTICA  AND SRB*L ROOT BEN  ULATION *MENTS, RUD  *ELEVON HIN  *NTS, NOZZL  *L MOMENTS,  *RFACE PRES  *OFILES ON  *ITER, ET,  *DETERMINE  *E COOLING N	* NE WING*PRESSUR' AL TAI * DING MO* DER AND* GE MOME* E GIMBA* AND SU* SURE PR* THE ORE* SRB, TO* ET BAS *	* * * * * * * * * * * * * * * * * * *	* / *ROCKWELL/ *ARC - *11-FOOT TRAN *NIC WIND TUN *L (UNITARY) * * * * * * * * * * * *	*-DMS \$0*	LINDAHL	* *DMS-DR-2258 *VOLUME O2 *APRIL, 1977 * * * * * * * * * * * * * *	7 55

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QUALITY	TO DESTRUCTION OF THE PARTY OF

						WIND	TUNNEL TES	T / D	MS DATA	PROCES	SING				:	21
TEST			*		FIGURATIONS		TEST		TYPE_OF		SCALE*		* 7	COGNIZANT	* BASIC *PUBLICATION	
ID	* 	REPORT T	ITLE *		TESTED	* 	PURPOSE	* 	TEST	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR COMMEN	TS
C TWT					S MODIFIED				ESSURE	*0.020				I. LINDAHL	*DMS-DR-22!	
					PODS AND CO					*0 90			*-DMS	5	*ADT ME 03	
2 72					MPS AND SRI					*1 40		11-FOOT TRANSO			*APRIL, 19	97
_		WELL INTER		LOME	SIMULATION					*		NIC WIND TUNNE	*		*	
-151,0							ON HINGE M	_		*	× × × × × × × × × × × × × × × × × × ×	L (UNITARY)	*		*	
		L INTEGRATI					NOZZLE GI			*	**************************************		*		*	
		CONFIGURAT					MENTS, AND			*	**		*		*	
		C (MODIFIE					E PRESSURE			*	*	•	*		*	
		HE 11-FOOT					ES ON THE			*	*	<b>K</b>	*		*	
	*	NIC WIND TO	NNNEL *				, ET, SRB;			*	Ψ.	<b>?</b>	*		*	
	*		*				RMINE ET B	_		*	*	<b>k</b>	*		*	
	*		*			YE CU	OLING RATE	S. *		*	*	<b>*</b>	*		*	
	*	TANGETTOAT	*			*		*		*	*		*		*	
					S MODIFIED V				ESSURE	*0 020		ROCKWELL/		H LINDAHL	*DMS-DR-22	
WT					PODS AND COL					*0.90			*-DMS	5	*VOLUME 04	
2					MPS AND SRE					*1.40		kii-FOOT TRANSC			*APRIL, 1	9 /
2				LOWE	SIMULATION					*		*NIC WIND TUNNE	*		*	
151,0		WELL INTER					ON HINGE M			*	*	L (UNITARY)	*		*	
		L INTEGRATE					NOZZLE GI			*	*	K	*		<b>*</b>	
		CONFIGURATI					MENTS, AND			*	*		*		*	
		C (MODIFIED					E PRESSURE			*	*	<b>K</b>	*		*	
		HE 11-FOOT	-				ES ON THE			*	*	<b>r</b>	*		*	
	*	NIC WIND TO	JNNEL *				. ET, SRB;			*	+	k	*		*	
	*		*				RMINE ET B			*	*	k	*		*	
	*		*			*£ C0	OLING RATE	\$ *		*	*	<b>,</b>	*		*	
	*		*			*		*		*		k 	*		*	
) *****					S MODIFIED 1				ESSURE	*0.020		*ROCKWELL/		H LINDAHL	*DMS-DR-22!	
TWT					PODS AND CO					*0 90		ARC -	*-DM:	<b>5</b>	*VOLUME 05	
2					MPS AND SRI					*1 40		+11-FOOT TRANSC			*APRIL, 1	9 /
72				LUME	SIMULATION					*		NIC WIND TUNNE	*		*	
151,0		WELL INTER					ON HINGE M			*	*	*L (UNITARY)	*		*	
		L INTEGRATI					NOZZLE GI			*	*	,	*		<b>≭</b>	
		CONFIGURAT					MENTS, AND	-		*	*		<b>不</b> 		<b>平</b>	
		C (MODIFIED					E PRESSURE			*	*	<b>.</b>	<b>本</b>		* *	
		HE 11-FOOT					ES ON THE			*	*	<b>K</b>	*		<b>本</b>	
	*	NIC WIND TO	JUNET *				, ET, SRB;			*	*		*		* 	
	*		*				RMINE ET B			*	*	,	<b>≭</b>		*	
	*		*			*E C0	OLING RATE	S *		*	*		*		*	
	*		*		_	*		*		*	*	*	*		*	

	WIND TUNNEL TEST / DMS DATA	PROCESSING	219
		*MODEL * * COGNIZANT	* BASIC
* * * CONFIGURATIONS	* * TEST * TYPE OF		*PUBLICATIONS
ID * REPORT TITLE * TESTED	* FORFOSE * TEST		
TEST * CONFIGURATIONS ID * REPORT TITLE * TESTED  ARC - *INVESTIGATIONS ON*88-OTS MODIFIED  11TWT - *A O.020-SCALE JE */OMS PODS AND CO  072	* PURPOSE * TEST  **********************************	*MACH RANGE* AGENCY	*OR COMMENTS  *OR COMMENTS  *DMS-DR-2258 *VOLUME O6 *APRIL. 1977  *  * * * *DMS-DR-2258 *VOLUME O7 *APRIL, 1977  *  * * * * * * * * * * * * * * * *
IA72 *-OTS) OF THE ROCK*PLUME SIMULATION	! *MENTS, RUDDER AND*	* *NIC WIND TUNNE*	*
CR-151,052*WELL INTERNATIONA*	*ELEVON HINGE MOME*	* *L (UNITARY) *	*
*L INTEGRATED SSV *	*NTS, NOZZLE GIMBA* *L MOMENTS, AND SU*	* * *	*
*CONFIGURATION 14D* *C (MODIFIED) IN T*	*REACE PRESSURE PR*	* *	*
*HE 11-FOOT TRANSO*	*OFILES ON THE ORB*	* *	*
*NIC WIND TUNNEL *	*ITER, ET, SRB; TO*	* *	*
*	*DETERMINE ET BAS *	* * *	*
* *	*E COOLING RATES *	* * *	*
* *	* *	т Т	**

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1		WIND TUNNEL TES	ST / DMS DATA	PROCESSING			220	0
+ TEST * ID * REPORT TITLE	*  * CONFIGURATI  * TESTED	* ONS * TEST * PURPOSE	*  * TYPE OF  * TEST		* * TESTING * AGENCY	* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS	
11TWT - *A O O2O-SCALE  072	JE */OMS PODS AND (88*D AIR MPS AND (80K*PLUME SIMULAT GONA* SSV * 14D* (N T* INSO* EL *  * *  *TASK CANCELLE *AY 1977  *  *  *  *  **  **  **  **  **  **	ED W*TO DETERMINE W COL*AND VERTICAL I SRB*L ROOT BENDING ION *MENTS, RUDDER *ELEVON HINGE M *NTS, NOZZLE GI *L MOMENTS, AND *RFACE PRESSURE *OFILES ON THE *ITER, ET, SRB; *DETERMINE ET E *E COOLING RATE *  O, M*  *  **  LE 1*OBTAIN (1)BASI ILCO*NFLIGHT AERO I *SUBSONIC VEH E *RO,(3)ELEVON, *DER/SPDBRK, AN *ODYFLAP EFFECT *ITH VEH 101 SE *AND GAPS;(4)RU *ER/SPDBRK AND *YFLAP HINGE MM *WITH SEALS;(5) *GHT TEST AND S *AIR DATA PROBE *ALIB,(6)EVALUA* *RN EFFECTS. *	TAI * 3 MG * AND * MOME * (MBA * ) SU * E PR * ORB * ; TO * BAS * ES *  * *FORCE  * * * * * * * * * * * * * * * * * *	*0.90 - *1 40 * * * * * * * * * * * * * * * * * * *		### ##################################	*JULY, 1982  *  *  *  *  *  *  *  *  *  *  *  *  *	7

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	221				SING	PROCES	DMS DATA	EST /	TUNNEL T	WIND					
	* BASIC	OGNI ZANT	* C	·		*MODE!		*		*	+	+		*	
	*PUBLICATIONS			10012110			TYPE OF	*	TEST	NFIGURATIONS *	* (0)	+		*	TES1
	*OR COMMENTS	RSONNEL	* P	AGENCY *	RANGE	*MACH	TEST	*	PURPOSE	TESTED *	*	TITLE *	REPOR	*	ID
	*DMS-DR-2261	MAKI/ARC			•	+0 36	ORCE	SIC I*	AIN (1)BA	TER VEHICLE 1*OBT	+ORBI1	OF TESTS +	ESULTS	- *	RC
	.*VOLUME 02						PRESSURE			(THOUT TAILCO*NFL	*01 W	0.36-SCAL*	ISING A	- *!	OSWT
	*JULY, 1982			40-FOOT BY 80-4		*0 256			H SIM TPS			(76-0) OF *			62
	*			FOOT SUBSONIC *		*			SONIC VEH			CE SHUTTLE+	_		A 100
Ç	*	EDWARDS				*		•	(3)ELEAD			ORBITER *			₹-167,
	*		*-DMS	r *		*			/SPDBRK,			NASA/AMES *			
۳.	*		*	k *		*			FLAP EFFE	·		1 CENTER 4*			
POOR	*		*	· ·		*		_	VEH 101			-FOOT SUBS+			
0	τ. -		*			*			GAPS, (4)		*	ND TUNNEL *			
Z	-1 -1		4.			*			SPDBRK AN		*	*	DA 100)	* 1	
$\sim$	* *		*			*			AP HINGE		*	*		*	
QUALITY			- -			** .i.			H SEALS;		*	*		*	
Ď	T •		-T						TEST AND		*	*		*	
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-	* •		ж -			ж 		.UATE *	B,(6)EVAL		*	*		*	
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	*DMS-DR-2262	CODNET THE	41 17	ROCKWELL/ *	,	* 00	CODOF	7 502 Au		*	*	*		*.	
		WOLFLA/TBC	_		,	*0.03 *0.3	·UKCE	TA DAL	OBIAIN FO	ER W/ ORB. A*TO	*CARRI	OF A CARR*	ESULTS	- *{	BCA
	*NOV . 1976			TRANSONIC WIND		*0 3 *0 7				, CARRIER ALO*ND					TWT
	*	VAUGHN				* *				MATED 747/ORB*EAC					472
	*	VACGIN	*-DMS			*			AND SEPA	<del>-</del>		ING 8 X 1 +			A6
	*		# DMG			, ,			O INVEST	•		TRANSONIC *			7-14/
			<u>.</u>			T 			ECTS OF C			JSING A O.*			
	*		* •			*			NCIDENCE,			747 CAM/+			
	*		1 1			-T-			E, STRUT		*	MODEL 45-*			
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	•		4			T		: IIIII *	Y FLAP SE		*	*		*	
	*		•			<u>.</u>		*		*GS	*	*		*	
	*DMS-DR-2262	CODMET THE	-π -υ.Ι D	ROCKWELL/	,	*0.00	-0505	*		*	*	4		*	
	*VOLUME 02				•	+0 03 +0 3	URGE	JRCE A*	OBIAIN FO	IER W/ ORB. A+TO	*CARRI	OF A CARR*	ESULTS	- *	BCA
ł	*NOV . 1976			TRANSONIC WIND		*0 7		TA UN*	MOMENT DA	, CARRIER ALO+ND	*LONE	CRAFT VERI*	ER AIR	- *	TWT
	*	VAUGHN				*0 /				MATED 747/ORB*EAC					472
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			WIND TUN	NEL TEST /	DMS DATA	PROCES	SSING						22
	*	*	*	*	:	*MODEL	;	*	*	COGNIZANT	*	BASIC	;
TEST	*	* CONFIGURATIONS	*	TEST +	TYPE OF	*	SCALE	* TESTING	* 7	TEST DMS	*Pl	JBLICAT	TON
ID	* REPORT TITLE	* TESTED	* PU	RPOSE *	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OF	COMME	NTS
	- *RESULTS OF HEAT									ALLEN, V		15-DR-2	
	- *RANSFER TESTS ON					*8 O		*AEDC -	* 01		*M#	ARCH,	197
Α.	/*A 0.0175-SCALE S			TES ON ORB*		*8 0		*HYPERSONIC WI			*		
74	*ACE SHUTTLE ORBI	-	* FUSEL	AGE SIDE *	•	*	•	D TUNNEL (B)		1. LINDAHL	*		
-144,5	596*ER MODEL (56-0)		*	*	!	*	•	*	*-DMS	5	*		
	*N THE AEDC VKF '	-	*	+	•	*	•	*	*		*		
	* HYPERSONIC WIN	ID*	*	*		*	,	۲	*		*		
	*TUNNEL (OH74)	*	*	*	•	*	:	*	*		*		
	*	+	*	*	•	*	;	*	*		*		
	- *TRANSONIC STABIL					*0 35		*LARC /		GAMBLE, M.			
	- *TY AND CONTROL C		*AILED A	ERODYNAMIC*	;	*1 20		+LARC -		JR /JSC; B		EC ,	19
7	/*ARACTERISTICS OF			SUBSTANT *		*		*8-FOOT TRANSO		ER, G WARI	E/LA*		
62	*A 0.015-SCALE (F			E DESIGN D*		*		*IC PRESSURE T			*		
-141,8	343+MOTELY CONTROLLE		*ATA ON	THE CURREN+	•	*	,	*NNEL	*H [	PARRELL/RI	*		
	*ELEVON) MODEL 49	*	*T ORBIT	ER CONFIGU*	•	*	,	*		V BALL	*		
	*-O OF THE SPACE	S*	*RATION	*	!	*	;	*	*M. I	NANN N	*		
	*HUTTLE ORBITER T	`E*	*	*	:	*		*	*-DM	5	*		
	*STED IN THE NASA	<b>/</b> *	*	*	:	*		*	*		*		
	*LARC 8-FOOT TPT	(*	*	*	:	*		*	*		*		
	*LA62)	*	*	*	:	*		*	*		*		
	*	*	*	4	:	*		*	*		*		
С	- *RESULTS OF TESTS	*CONFIG 1 ORBITER	*ASSESS	EFFECTS OF+	FORCE	* 030	) /	*ROCKWELL/	*J. 1	J MARROQUI	IN/R*DI	MS-DR-2	126
PT	- *USING A O 030-S0	A*WITH NOSE AND TA	I*RCS ORI	FICES LOC *	:	*0 26		*ARC -	* I		∗U*	AN.,	19
8	/*LE MODEL (45-0)	O*L RCS JETS	*ATED ON	ORBITER N*	1	*0.26		*12-FOOT PRESS	U*D B.	. WATSON	*		
159	*F THE SPACE SHUT	T*CONFIG 2 ORBITER	*OSE. EF	FECTS OF MY	•	*		*RE TUNNEL	*-DM		*		
-141.8	332*LE VEHICLE ORBIT					*		*	*		*		
,	*R IN THE NASA/AR			IFIED ELEV*		*		*	*		*		
	· · · · · · · · · · · · · · · · · ·	*CONFIG 3 ORBITER				*		*	*		*		
	*TUNNEL (OA159)					*		*	*		*		
	*	*CONFIG 4 ORBITER		*	ı	*		*	*		*		
	*	*WITH SIMULATED B		*	!	*		*	*		*		
	*	*LANCE SUPPORTS U		*	:	*		*	*		*		
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			WIND TUNNEL 1	EST / DMS DATA	PROCESSING		224
TEST		* * CONFIGURA FLE * TESTE				* COGNIZANT TESTING * TEST DMS AGENCY * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
LARC CFHT 118 MA22	- *RESULTS OF - *A22 IN THE /*ARC 31-INCH *ON AN O 010 ,605*MODEL (32-0 *HE SPACE SH *CONFIGURATI *O DETERMINE *JET FLOW FI *TERACTION A *INVESTIGATE *AL GAS EFFE * * * *	TEST M*REACTION CON NASA/L*SYSTEM CFHT * -SCALE* ) OF T* JTTLE * JTTLE * ON 3 T* RCS * ELD IN* ND TO * RT RE* CTS *	**TROL *TO STUDY TURN **EPEATABILITY **EFFECT ON JI **ERACTION DA **DETERMINE EROF MODEL HEROF **, ELEVON, BO **P DEFLECTIOR **JET INTERACC**STUDY MULTIFUR **T FIRING EFFECTS**  **RATIO EFFECTS**  **N EFFECTS**	NNEL R+FORCE ( AND * ET INT* FA, TO* FFECTS* ATING * DDYFLA* US ON * FION, * PLE JE* FECTS,* AREA * FS, ST* DSITIO* *	*0 0100 / *MS *10 3 - *LA *10.3 +C0 * * * * * * * * * * * * * * * * * * *	CC / *D B KANIPE/JSG IRC - *J W. BALL INTINUOUS-FLO*G. W. KLUG HYPERSONIC T*-DMS INEL *  *  *  *  *  *  *  *  *  *  *  *  *	*VOLUME 02 *JUNE, 1976 * * * * * * * * * * * * * * * * * * *
LARC CFHT 118 MA22 CR-147	- *RESULTS OF - *A22 IN THE /*ARC 31-INCH *ON AN O 010 ,606*MODEL (32-0 *HE SPACE SH *CONFIGURATI *O DETERMINE *JET FLOW FI *TERACTION A *INVESTIGATE *AL GAS EFFE *	CFHT * -SCALE* ) OF T* UTTLE + DN 3 T* RCS * ELD IN* ND TO * RT RE*	*TROL *TO STUDY TUI  *EPEATABILIT'  *EFFECT ON JI  *ERACTION DA'  *DETERMINE E  *OF MODEL HE.  *, ELEVON, BI  *P DEFLECTIOI  *JET INTERAC'  *STUDY MULTII  *T FIRING EFI  *INVESTIGATE  *RATIO EFFEC'  *UDY SUPER PI	( AND * ET INT* FA, TO* FFECTS* ATING * DDYFLA* IS ON * FION, * PLE JE* FECTS,* AREA * IS, ST*	* *W		* * * * * * * * * * * * * * * * * * *
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	*				*				*				*			DEL		*			*		GNIZA		* B/	SIC
ST	*				*			GURATION	_		TEST			TYPE					TESTING		*		T DMS			CATIONS
[D	*	REP	ORT 	TITLE	* 		T 	ESTED	*	F	URPOSI	E 	*	TEST	*M 	ACH	RANG	E *	AGENCY		*	PE	RSONN	EL 	*OR CC	MMENTS
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				AND P			1 1 1 1 1	41-0			TOTAL				-	70			TUNNEL	MILINE	*ANN			. 001	* OOME	1913
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	*0D	EL N	NUME	BERS A	X13*				*N	HE	CARRI	ER RI	G*		*			*			*				*	
	*19	P-1	AND	47-0	) I*				*HT	TIP	FIN	ORBI	T*		*			*			*				*	
	*N	THE	BOE	ING T	RAN*				*ER	ELE	VON H	INGE	M*		*			*			*				*	
	*\$0	NIC	WIN	ND TUN	INEL*				*0M	ENTS	WERE	ALSO	) *		*			*			*				*	,
	*(0	( PA			*			•	*ME	SUR	ED		*		*			*			*				*	
	*				*				*				*		*			*			*				*	
-	*RE	SUL	rs c	OF AN	INV+E	30E	ING	AX 13 19P-	1 *SI	(-cc	MPONE	NT FO	)R*F(	DRCE	*	0.03	3,	*F	ROCKWELL/		*W F	≀. C	DVING	TON/E	30*DMS-0	R-2268
				ON OF										RESSUR	*O	03	/	′ <b>*</b> 1	TBCA -		*EIN	iG,	H SEX	TON,	+ volu⊩	IE O3
						DRB	ITER	47-0			MEAS				-	4			TRANSONIC	WIND				. OLI	LM*JUNE,	1979
				AND P							TOTAL				*0	70		*1	TUNNEL		* ANN				*	
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	WIND TUNNEL TEST / DMS DATA	PROCESSING	227
+ * TEST * * CONFIGURATIONS ID * REPORT TITLE * TESTED	S * TEST * TYPE OF	*MODEL * * COGNIZANT * SCALE* TESTING * TEST DMS *MACH RANGE* AGENCY * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
TBCA - *RESULTS OF AN INV*BOEING AX1319P-1 BTWT - *ESTIGATION OF AER*CARRIER 1477	*CE AND MOMENT DAT*PRESSURE  *A WERE MEASURED O*  *N THE TOTAL VEHIC*  *LE AND ON THE ORB*  *ITER TAILCONE. TH*  *REE-COMPONENT FOR*  *CE AND MOMENT DAT*  *A WERE MEASURED O*  *N THE CAPRIER RIG*  *HT TIP FIN ORBIT*  *ER ELEVON HINGE M*  *OMENI. WERE ALSO *  *MEASURED. *  1 *SIX-COMPONENT FOR*FORCE  *CE AND MOMENT DAT*PRESSURE  *A WERE MEASURED O*  *N THE TOTAL VEHIC*	* O O3	+ *VOLUME O4 LM*JUNE, 1979  *  *  *  *  *  *  *  *  *  *  *  *  *

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TEST	*			*	CONFIGURATIO	NS *	TEST	*	TYPE OF		SCALE		STING	*	TEST DMS	*PUBLICA	
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH			ENCY	*	PERSONNEL	*OR COMM	
ALSPAN	- *T	RANSONIC	HIGH I	RE * 14	10A/B/C=826 C	9 E*TO (	OBTAIN BASIC	S*F	ORCE	*0 015	5 /	*LARC	/	*H.	PARRELL/RI	*ĐMS-DR-	2269
TWT .	- *Y	NOLDS NUI	MBER S'	TA+43	8 F8 M16 N28	R5 *HUT	TLE AERO DAT	A *		* 35	-	*CALS	PAN -	ل∗	D GAMBLE/JSC	*SEPT.,	197
8-103	/*B	ILITY ANI	CONT	RO+VE	3 W	*THR	DUGH A FULL	RA*		*1 20		*8-F0	OT TRANS	0N*R	H. LINDAHL	*	
70	* <u>L</u>	CHARACT	ERISTIC	CS*		*NGE	OF ELEVON A	ND*		+		*IC W	IND TUNN	EL*-DI	MS	*	
- 147,	624*0	F A 0.01	5-SCALI	E *		*AIL	ERON DEFLECT	10*		*		*		*		*	
•	*R	EMOTELY	CONTRO	LL*		*NS.	VERIFICATIO	N *		*		*		*		*	
	<b>*</b> E	D ELEVON	MODEL	(*			DATA OBTAINE			*		*		*		*	
	*4	4-0) OF	THE SP	AC*			DTHER FACILI			*		*		*		*	
		SHUTTLE					AND EFFECTS			*		*		*		*	
		ESTED IN					EYNOLDS NUMB			*		*		*		*	
		SPAN 8-F				*		*		+		*		*		*	
	*			*		*		*		*		*		*		*	
RC	- *1	OW SUPER	SONTO	ST*NE	RBITER W/ IND	FPF*TO	GENERATE A D	FT*F	ORCE	*0 015	. /	*LARC	. /	*.1	D. GAMBLE/JSC	*DMS-DR-	-2270
WT					ENTLY-OPERAT				01100	*1 5		*LARC		*	D. GAMBEL/ 001	*DEC .	19
18					FT RIGHT ELE					*2 0			ARY PLAN	₩.		*	
63A		OF A O.			•		URRENT ORBIT			*			TUNNEL			*	
		REMOTEL			JRI HOLS		FIGURATION	T.V.+		٠ •		* T140	TOMMER	4		**	
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		49-0) OF				•										·	
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		CE SHUTT		11.		<b></b>		*		- A-		τ 		- T-		±	
	*	R (LAGSA	,	*		*		*		*		*		*		Ψ Ψ	
RC		UDEDCOM	O CTAD	TI AME	DEL CO O ULT	**************************************	DETERMINE OF	* 	0000	* 0 045	- /	т 	. ,	*W	P. PHILLIPS/	4 + DMC - DD -	007
WT					DEL 69-0 WIT				URUE	*0 015	-	*LARC	-		P. PHILLIPS/	*FEB	197
					REBODY RSI MO					*1.5		*LARC		*RC	E. VAUGHN	*rco.,	19
47		ARACTERI					EFFECTS OF R			*4.6						*	
32		0.015 5					UCTION ON FO	· ×		*		*IND	TUNNEL		B WATSON	·	
71A/B		EL 69-0				*EB01	υY	*		*		*		*-D	MS	# 	
-151,		ACE SHUT				*		*		*		**		*		*	
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TEST				* (	CONFIGURATIONS	*	TEST	*	TYPE OF			+ TESTING	*	TEST DMS	*PUBLI	CATIONS
ID		REPORT '		*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	AGENCY	* 	PERSONNEL	*OR CO	MMENTS
1550		TECH TO O	F A&L 7411/	+50	<u>-</u>	+TO 1	NVESTIGAT	FE 8545	innes	*0 010	h / ·	ROCKWELL/	* E	CHEE, J. DAI	LE*DMS-DI	R-2272
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		E SHUTTL				*		*		*	,	k	*		*	
		IN THE				*		*		*	;	ł	*		*	
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	*	JNNEL B		*		*		*		*		<b>k</b>	*		*	
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AEDC	- *	RESULTS OF	F AN INV	+55	V 3	*TO I	NVESTIGAT	ΓE ΔE∗F	ORCE	+0 01		ROCKWELL/		CHEE, J. DAI		
HWTB	- +	STIGATIO	N OF EXT	*		*R00Y	NAMIC INT	TERAC*		*5 93		*AEDC -		/JSC	*VOLUMI	_
C4A	/+	RNAL TAN	K SEPARA	*			IS BETWEEN			*		*HYPERSONIC_			*JUNE,	1977
IA114	*	TION EFFE	CTS USIN	*			ORBITER D			*		D TUNNEL (B)		M MOSER JR	*	
CR-151,		3 AN O 01					LS ABORT	SEPA*		*	:	ł	*-D	MS	*	
		MODEL (52:				*RATI	ON	*		*	,	<b>k</b>	*		*	
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TEST	*			*	CONFIGURATION	S *	TEST	*	TYPE 0			TESTING	*	TEST DMS		CATIONS
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR COM	4MENTS
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V					X1318I-1, 747/							ROCKWELL/		ARZA/RI	*VOLUME	
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26					1, ATY, ATX)		OTHER AT			*	*			A SARVER	- T	
- 144,		47 CARRII					TION DIST				- T			W KLUG	*	
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TEST		*				*	C.	NETG	URΔ.	TIONS	*	т	EST	*	TYF	PE OF			ALE	TES	TING	*	1	EST DMS		*PUBLIC	ATION
ID		* F	REPOR	T T	TLE	*	-		STE		*		POSE		TE					AGE		*		PERSONN	EL	*OR COM	MENTS
	 614	*RED***********************************	SULTS YNAMI ION O JTTLE ST CO ARATI ISTIC O.01 ELS ( -1) I 4-FOO WIND SULTS YNAMI ION O JTTLE	OF AN THE CON (CITE OF AN THE CITE OF AN	AN STORMAN AND STATE OF THE STA	ER***  ER***  E' **  E' *  E' *	XX13 747/ 18-0 51, XX13 747/ 18-0	TE 318I- 44 0 (02 ATY,	1. O. AT.	747/1 747/1 4, 06 x)	* O I E E ARROLL	PURESEMITY ACH V OTHE TION OM THE FIGUR NG FR TO 75 PRESE MITY ACH V OM THE TION OM THE	POSE NT THE EFFECT EHICLE R AT S DISTAN E MATE ATION) OM 1.5 FEET  NT THE EFFECT EHICLE R AT S DISTAN OM 1.5	* * * * * * * * * * * * * * * * * * *	ORCE	EST ESURE		i RA	NGE**  / 1	ROCKW ROCKW HIGH TUN  K K K K K K K K K K K K K K K K K K	NCY  ELL/ SPEED NEL	** ** ** ** ** ** ** ** ** ** ** ** **	R L SPARED DYNAME OF THE PROPERTY OF THE PROPE	GILLIN ZA/RI ZIEGLE MICS LA SARVE KLUG  GILLIN ZA/RI ZIEGLE MICS LA SARVE KLUG  KLUG	EL  S. V R/GAS BR		2-227: 03 19'
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						*		*		*MODEL		*		*	COGNIZANT	* BAS	TC
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10		REPUR	1 11166		169160		PURPUSE		1531	MAGH	RANGE	* AUG					
τv	- *	RESULTS	OF AN	AFR*A	X1318I-1, 747/1	*TD P	RESENT THE	PR∗F	ORCE	*0.012	25 /	*ROCKWI	ELL/	*R.L.	GILLINS, V.	E*DMS-DR	-2273
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TWT					CENT CONFIG.)					*4.96		*MSFC	_	*V V	V. SPARKS	*FEB ,	1976
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	*			*		*		*		*		*	-	*		*	
RC	- *	RESULTS	DE AN	FXP+0	0125-SCALE SSV	/ +LONG	TTUDINAL . LA	TF*F	ORCE	* 0.0	125 /	*ROCKW	ELL/	*V. 8	ESPARZA.RI.J	*DMS-DR	2-2275
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₹-144,4	603*	RACTERI	STICS F	OR *		*FOR	FIXED 747 A	NG*		*		*L		*-DMS	>	*	
	*	THE ORB	ITER/74	7 U*		*LES	OF ATTACK D	)F *		*		*		*		*	
	*	SING A	0 0125-	SCA*		*0.2	4 DEGREES W	HI*		*		*		*		*	
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j	S-DR-2276	CARROLL/MMC*DMS	H. R	/ +	MSFC	*	25 -	EAT-TRANS	TNF +H	ETERMINE THE	CLEAN	O-DEG MOSE-O	ND*4	MSEED A	AT TOAL	- *HF	EDC
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		# ANN	M M.	IIC WIN+	SUPERSON					NT CAP/LIGHTN				AINED O			71A 1A
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		*	k	*		*			THE*	WHICH FORMS	DONT	S-40-DEG)(NO	1 46	SCALE M	0425		
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TEST		* DFI	י דמחם	TITLE	*	CON	FIGURATIONS TESTED	*	TEST PURPOSE		TYPE OF				TESTING	*	TEST DMS		UBLICA	
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61		*OF A	0 01	O-SCAL	.E *			*	•	*		*			ESSURE TUNN		HARL) LARO		AY.	197
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Ŧ								5*AIL	ED AERODYNAN	IIC*		*4 60		*LA			WARE, R.	FOURN*c	IUNE,	197
51	-			CTERIS		8 W)			A BASE FOR (			*		+UN	ITARY PLAN	W*IEF	R/LARC	*		
3B				.015-5					NT SS ORB (	*NO		*		*IN	D TUNNEL	* J	GAMBLE/US	C *		
144,				ELY CO				*F.		*		*		*		* ქ	W. BALL	*		
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, . <del></del>	_	*HEAI-	·FLUX	GAGE	ME*F	LAT-	PLATE MODEL	*TO	DETERMINE FE	AS*F	fEAT-TRAN		•	*LA			SPENCER,			
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				OF 4			•		GAGES TO DEF			*		*D	TUNNEL		C POPE /	LIV *		
144,				HIGH					DUNDARY LAYE			*		*			W. BALL	*		
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TEST		- T		*	CONFIGURATIONS	*	TEST	*	TYPE OF		-	+ TESTING	*	TEST DMS	*PUBLIC	ATIONS
ID		*	REPORT TITE		TESTED		PURPOSE		TEST			+ AGENCY	*	PERSONNEL	*OR COM	MENTS
		C1	UBSONIC STAE		ACEL THE	*DEE IN	E NON-LIN	E A D + E	OPCE	+ 0.0	15 / 1	HARC /	*.1 8	UNDERWOOD/J	s*DMS-DR	-2281
) ) T		-	AND CONTROL		ASELINE		YNAMIC CH		ORGE	*0 22		ARC -	*C		*SEPT.,	
5 <b>- 1</b>		-	ACTERISTICS				ISTICS UT			*0.29		*12-FOOT PRESSI		PARRELL/ROCKW		
6	′		O15-SCALE (				SMALL INC			*		RE TUNNEL		INTERNATIONAL		
	62		TELY CONTROL				IN ALPHA.			*	k	*	+D 8	. WATSON	*	
147,	02		LEVON) MODEL			_	ND ELEVON			*	*	+	*-DN	/S	*	
			OF THE SPACE			*		*		*	*	k	*		*	
		-	TTLE ORBITER	_		*		*		*	,	+	*		*	
			ED IN THE NA			*		*		*	3	*	*		*	
			C 12-FOOT PR			*		*		*	٠,	+	*		*	
			E TUNNEL (LA			*		*		*	١	<b>k</b>	*		*	
		*		*		*		*		*	*	*	*		*	
SC	_	*B	ASE PRESSURE	AND*P	LUME SIMULATION	*OBTAI	N BASE DA	TA +F	IEAT~TRAN	5+0 02:	25 / >	*ROCKWELL/		√ FOUST/RI	*DMS-DR	
SWT			EAT TRANSFER				WER ALTIT			<b>*2 2</b>	- `	*LERC -	*D V	√.HERSEY	*APRIL,	1978
}			TS OF THE O			*S THA	N PREVIOU	SLY*		+3 5	*	*10 BY 10-FOOT	*-D1	1S	*	
34	•	*-:	SCALE SPACE	SHUT*		*TESTE	D OBTAIN	BA *		*	¥	SUPERSONIC WIN	٧*		*	
	407		LE PLUME SIM			*SE DA	TA ABOUT	SSM*		*	*	⊁D TUNNEL	*		*	
			ON MODEL 19-			+E PAR	ALLEL POS	*ITI		*	,	*	*		*	
		* I I	N THE NASA-L	.EWIS*		*ON VE	RIFY PREV	*TOU+		*	,	+	*		*	
			OX10 FOOT SW			+5 BAS	E DATA OB	*IAT		*	`	*	*		*	
		*		*		*N GAS	RECOVERY	TE*		*	8	*	*		*	
		*		*		*MPERA	TURE DATA	. *		*	4	+	*		*	
		*		*		*		*		*	,	*	*		*	
,	~	*A	LOW SPEED V	IND +0	RBITER O89B	*CONFI	GURATIONA	L E*F	ORCE	<b>+ 050</b>	•	*MSC /	*D E		*DMS-DR	
!T	-	*1	UNNEL TEST C	)F A *		*FFECT	S STUDY F	OR *		*.067		*LTV -	*-D1	4S	*NOV ,	1970
:	,	/+0	050 SCALE N	MODEL*		*6 CAN	ARDS AND	TWO*		*.067		*LOW SPEED WIN	)*		*	
4	•	*0	F SHUTTLE OF	BIT *		*TAILS	ON ORBIT	ER *		*	k	*TUNNEL	*		*	
147,			R (MODEL 089			+089B		*		*	3	*	*		*	
			INVESTIGATE			*		*		*	,	*	*		*	00
		*L	ONGITUDINAL	AND *		+		*		*	•	+	*		*	Ŧ Z
		*L.	ATERAL DIREC	TIO +		*		*		*	,	*	*		*	G
		*N.	AL EFFECTS C	F CA+		*		*		*	>	*	*		*	ŏ
		*N	ARD AND TAIL	. CON*		*		*		*	•	<b>+</b>	*		*	OF POOR
		*F	IGURATIONAL	*I DOM		*	•	*		*	,	*	*		*	葱೯
		≯F	ICATIONS IN	THE *		*		*		*	,	*	*		*	
		*L	TV LSWT	*		+		*		*	,	*	*		*	
		*		*		*		*		*	,	+	*		*	58
																QUAL
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						WIND	TUNNEL TEST	Г /	DMS DATA	PROCES	SSING							23
	+			*		*		*		*MODE!	- <i></i> -	*	*	COGN	IZANT	*	BASI	C
TEST	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST I	DMS	*PU	BLICA	<b>JOIT</b>
ID	*	REPOR	T TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSO	ONNEL	*OR	COMM	IENTS
RC 7SWT					TEGRATED SPACE				STRUCT-DY	√+0 03! +0.65		*ROCKWELL/		W FOI			IS-DR-	
75W1			GRATED SP				NTEGRATED SI			*0.65 +2 5	-	*ARC - *9-FOOT BY 7			SSNER/AF	∪×∗∪≀ AM*		197
17WT			TLE VEHIC				. TO MEASURE			*		*OT SUPERSON			INDERS	* 111H	ι,	19
S2A/B			(84-0TS)				TUATING PRE			, ,		*WIND TUNNEL		in 3		*		
			NASA-AMES				IN THE ORB			*		*NITARY)	* *			*		
			H CENTER				AYLOAD BAY I			*		*11-FOOT TRA				*		
			PLAN WIND				AERODYNAMIC			*		*NIC WIND TU				*		
			(IS2A/B)				W ACROSS TH			*		*L (UNITARY)				*		
	*		(1020,0)	*			SYSTEM HOLI			*		*	*			*		
	*			*			DEFINE FORE			*		*	*			*		
	*			*			AFT BUFFET			*		*	*			*		
	*			*			ON THE VERT			*		*	*			*		
	*			*		*L T.		*		*		*	*			*		
	*			*	•	*		*		*		*	*			*		
RC	- *	AERODYN	AMIC NOIS	E+IN	TEGRATED SPACE	*TO !	MEASURE AER	DY*S	STRUCT-DY	V+0 03!	5 /	*ROCKWELL/	*ປ	W FO	UST/RI	*DN	IS-DR-	228
75WT	- *	OF THE	O 035-SCA	*SH	UTTLE VEHICLE	*NAM	IC NOISE ON	TH*		<b>*0 65</b>	-	*ARC -	*D	L KAS	SSNER/AF	C*VD	LUME	02
13	/*	LE INTE	GRATED SF	A +84	-ots	*E II	NTEGRATED SE	* TUF		*2 5		*9-FOOT BY 7	-F0+W	B. ME	INDERS	*M4	Υ,	191
1TWT	~ *	CE SHUT	TLE VEHIC	CL*		*TLE	, TO MEASURE	E F*		*		*OT SUPERSON	IC *-D	MS		*		
S2A/B			(84-OTS)			*LUC	TUATING PRE	ssu*		*		*WIND TUNNEL	(U*			*		
R-151,	036*	IN THE	NASA-AMES	*		+RES	IN THE ORB	TE*		*		*NITARY)	*			*		
	*	RESEARC	H CENTER	#∪		*R P	AYLOAD BAY E	*BUC		*		*11-FOOT TRA	N\$0*			*		
	*	NITARY	PLAN WIND	) +		*T0 /	AERODYNAMIC	*		*		*NIC WIND TU	NNE*			*		
	*	TUNNELS	(IS2A/B)	*		*FLO	A ACROSS TH	E <b>V</b> ∗		*		*L (UNITARY)	*			*		
	*			*		*ENT	SYSTEM HOLE	ES.*		*		*	*			*		
	*			*		*10 1	DEFINE FORE	A *		*		+	*			*		
	*			*		*ND	AFT BUFFET I	LOA*		*		*	*			*		
	*			*		*DS	ON THE VERT	I CA*		*		*	*			*		
	*			*		*L T	4IL	*		*		*	*			*		
	*			*		*		*		*		*	*	*******		*		
LEDC					-O, WITH AND W				HEAT-TRAN			*RDCKWELL/		QUAN/			15-DR-	
WTB					OUT PROTUBERANG					*8 0	-	*AEDC -		A SA		*ДР	PRIL,	19.
					, 50% FOREBODY					*8 0		*HYPERSONIC			SER UR	*		
H50A			0 04 SCA		DELS		TO VARIOUS			+		*D TUNNEL (B	) *-9	IMS		*		
K~144,			RCENT FOR				BERANCES AN	J R*		*		<b>₹</b>	*			*		
			DELS (82-			≉ ECE!	SSIONS	*		*		<b>*</b>	<b>*</b>			*		
			E ROCKWEL			*				*		# 	*			-# -		
			HUTTLE OF	( F		*		*		₹ .t.		#	*			*		
	*	BITER		*		*		- x		*		**	*			不		

	··				WIND	TUNNEL T	EST /	DMS DATA	PROCE	SSING					237
			 *		*		*		+MODE	 {_	*	*	COGNIZANT	* BAS	SIC
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBLIC	CATIONS
ID	*	REPORT TITLE	*	TESTED	*	PURPOSE		TEST		RANGE		*	PERSONNEL	*OR CON	MENTS
14-TWT - 150-1 0A220	+P  /*I! * 5*(i *Ei *R!	ROBE INVESTIGATON UTILIZING AT 10 SCALE ORBITICATION FOR BODY IN THE AMITES ANTER	T *L O * W ER * S ER * S ER * W ER *	SV ORBITER (MOD. 57-0) FOREBODY ITH TPS TILES II MODIFIED CONFIG. SV ORBITER (MOD. 57-0) FOREBODY TPS. WITH ADP A	*STA"  +RROI  *E LI  E*ATTA  *TERI  N*ENCI  *ENT  E*ERNA  *YSTI  N*BE	TIC PRESS R, TO DET DCAL ANGL ACK, AND MINE THE E OF THE DOOR TW ATE AIR D EMS WILL EVALUATED	URE E* ERMIN* E OF * TO DE* INFLU* AIR V* O ALT* ALSO * INAME*		*O 4 *1.2 * * * * * * * * * * * * * * * * * * *		*ROCKWELL/ *ARC - *14-FOOT TRAN *NIC WIND TUN +L * * * * *	*LL 450*N/R	COCKWELL AUGUST/ROCKW A. MENA/RO L B LOWE	TO*OCT ,  * 'EL*	2-2286 1976
	* * * *		*, *E *C *C	THE ORBITER ADIFLIGHTTEST NOSE OM WITH MODIFI TPS AND TPS FL HT CONFIGURATIO	*SYS' E*WARI I*D II N*THE *	TEM IN TH D FUSELAG NSTRUMENT RCS CHAM	E FOR* E, AN* ED IN* BERS *		*	,	* * * * * * * *ROCKWELL/	* * * * *	GARTON/RI	* * * * * * * * *	o 1288
		ESULTS OF BASE ATING INVESTIG		SASE HEATING MOD		ERMINE GA RY TEMPER			*		*LERC *		E VAUGHN	*NOV ,	
OH64		DNS ON A O O4		. 25.0		PRESSURE			*		*SPACE POWER	FA*M	M MOSER JR	*	
		LE SPACE SHUTTI				TIONS, BA			*		*CILITY	*~D/	15	*	
01. 151,00		RBITER BASE (ME				NG RATES			*		*	*		*	
		L 25-0) IN THE				ND STAGE			*		*	*		*	
		SA/LARC SPACE I				ESULTING			*		*	*		*	
		ER FACILITY	+			ME RECIRC			*		*	*		*	<b>'</b> ^ -
	*		*		*ON	AND DIREC	T PLU*		*		*	*		*	
	*		*		*ME	IMPINGEME	NT *		*		*	*		*	
	*		*		*		*		*		*	*		*	ORIGINAL OF POOR
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		WIND TUNNEL TES	ST / DMS DATA	PROCESSING		23
*	*	*	*	*MODEL *	* COGNIZANT	* BASIC
TEST *	* CONFIGURATI	ONS * TEST	* TYPE OF			*PUBLICATION
ID * REPORT T		* PURPOSE	* TEST	*MACH RANGE* AGENCY	* PERSONNEL	*OR COMMENTS
LAD - *RESULTS OF	A LAND*SPACE SHUTTLE	ORB*TO DEFINE THE	ORB*FORCE	*0 0405 / *ROCKWELL	/ *R B.RUSSELL, R	C*DMS-DR-2289
	TEST US*ITER 140C	*ITER LANDING O		*0 17 - *NRLAD	· · · · · · · · · · · · · · · · · · ·	*VOLUME 01
1 /*ING A O 04	O5-SCAL*	*SYSTEM PRESSUR			D WIND*D W.HERSEY	*DEC . 197
163 *E MODEL (1	6-0) DF*	*LOADING. TO RE		* *TUNNEL	*W B. MEINDERS	*
-147,611*THE SPACE		*D LANDING GEAR		* *	*-DMS	•
*E ORBITER		*OR AND STRUT H		•	- DM3	•
*ROCKWELL I		*E MOMENT LEVEL		· · · · · · · · · · · · · · · · · · ·	<b>.</b>	•
*IONAL NAAL		*TO RECORD AERO		T T	±	T.
*UNNEL (OA		*AMIC INFLUENCE		* *	<u>.</u>	<b>↑</b>
*	*	*LANDING GEAR C		~ · ·	<u>.</u>	<b>-</b> 7 - <b>L</b>
*	· *	*ORBITER FORCE		<b>T T</b>	at.	T.
*	• •	*A AND TO INVES		T T		*
*		*ATE 40X80 ARC		* *	#.	4* u
**	# •	*NEL STRUT SIMU		* *	*	<b>₹</b>
•	7 44			* *	*	<b>₹</b>
•	*	*ION EFFECTS	*	* *	*	*
LAD - *RESULTS OF	A LANDACCARE COURTS	*	*	* * * * * * * * * * * * * * * * * * * *	*	*
	A LAND*SPACE SHUTTLE TEST US*ITER 140C			*0 0405 / *ROCKWELL	•	
		*ITER LANDING G		+0 17 - *NRLAD	·	*VOLUME O2
. , ,, , , , , , , , , , , , , , ,		*SYSTEM PRESSUR			D WIND*D W HERSEY	*DEC., 19
		*LOADING, TO RE		* *TUNNEL	*W B MEINDERS	*
-147,612+THE SPACE		+D LANDING GEAR		* *	*-DMS	*
*E ORBITER		*OR AND STRUT H		*	*	*
*ROCKWELL I		*E MOMENT LEVEL		* *	*	*
*IONAL NAAL		*TO RECORD AERO		* +	*	*
*UNNEL (DA1	63) *	*AMIC INFLUENCE		* *	*	*
*	*	*LANDING GEAR C		* *	*	*
*	*	*ORBITER FORCE		* *	*	* _
*	*	*A AND TO INVES		* *	*	* 9
*	*	*ATE 40X80 ARC	TUN*	* *	*	*
+	*	∗NEL STRUT SIMU	!LAT*	* *	*	* •
*	*	*ION EFFECTS	*	* *	*	* (
*	*	*	*	* *	*	* * * * * * * * * * * * * * * * * * * *
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						WIND	TUNNEL TEST	/	DMS DATA	PROCES	SING					239
	 *			 *		+		+		*MODEL		*	*	COGNIZANT	*	BASIC
TEST	г *			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	∗Pι	BLICATIONS
ID	*		REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR	COMMENTS
NRLAD	~ *	모두	SHITS OF A LAND	+SF	PACE SHUTTLE DRE	מ מד*צ	EFINE THE OF	≀B*F	DRCE	*O 040	5 /	*ROCKWELL/	≁R	B.RUSSELL, R.	C*DN	S-DR-2289
LSWT			G LOADS TEST US			*ITER	LANDING GEA	\R*P	RESSURE	*0 17	-	*NRLAD -	*	MENNELL/RI		LUME 03
751			G A 0.0405-SCAL		· ····		EM PRESSURE			*0.17		*LOW SPEED	WIND*D	W.HERSEY	*DE	C., 1976
OA 163			MODEL (16-0) OF			*LOAD	ING, TO RECO	)R*		*		*TUNNEL		. B MEINDERS	*	
CR-147	613+	ΤH	E SPACE SHUTTL	*		*D LA	NDING GEAR D	*00		*		*	*-	DMS	*	
			ORBITER IN THE			*OR A	ND STRUT HIN	√G*		*		*	*		*	
			CKWELL INTERNAT			*E MO	MENT LEVELS,	*		*		*	*		*	
	*	10	NAL NAAL WIND T	*		*T0 R	ECORD AERODY	<b>/N</b> *		*		*	*		*	
	*	UN	NEL (DA163)	*		*AMIC	INFLUENCE C	)F*		*		*	*		*	
	*		·	*		*LAND	ING GEAR ON	*		*		*	*		*	
	*			÷		*ORBI	TER FORCE DA	<b>\T</b> *		*		*	*	•	*	
	*			*		*A AN	D TO INVEST	[G*		*		*	*		*	
	*			*		*ATE	40X80 ARC TU	JN*		*		*	*		*	
	+			*		*NEL	STRUT SIMULA	<b>∖</b> T *		*		*	*		*	
	*			*		*ION	EFFECTS	*		*		*	*		*	
	*			*		*		*		*		*	*		*	
NRLAD	<b>-</b> *	RΕ	SULTS OF A LAND	*S	PACE SHUTTLE ORE	3*TO D	EFINE THE OF	₹B≯F	ORCE	*0 040	- •	*ROCKWELL/		B.RUSSELL, R. MENNELL/RI		IS-DR-2289 LUME 04
LSWT			G LOADS TEST US		TER 140C		LANDING GEA		RESSURE	*0 17	-	*NRLAD -				C . 1976
751			G A O 0405-SCAL				EM PRESSURE			+O 17 *		*TUNNEL		. B MEINDERS	*	.0 , 137
OA 163			MODEL (16-0) OF				ING, TO RECO					* I UNIVEL		DMS	4	
CR-147,			E SPACE SHUTTL				NDING GEAR I			*			*	DMS	., ¥	
		_	ORBITER IN THE				ND STRUT HIN			*		*	т ъ			
			CKWELL INTERNAT				MENT LEVELS,	•		*		<b>★</b>	т 		4	
			NAL NAAL WIND T				ECORD AERODY			*		<i>т</i>			*	
	*	UN	NEL (DA163)	*			INFLUENCE (					*			., 	
	*			*			ING GEAR ON			*		*	- T		*	
	*			*			TER FORCE DA			T		•	*		*	<b>2 2</b>
	*			*			D TO INVEST!			*		<b>.</b>	*		*	77 20
	*			*			40X80 ARC TU			•		, sk	*		*	IGINAL Poor
	*			*			STRUT SIMULA	41 T		•		sk	*		*	0 >
	*			*		* 1010	ELLECI 2	*		•		**	*		*	$\mathcal{Q} \mathcal{S}$
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			WIND TUNNEL TEST	/ DMS DATA	PROCESSING			24
	*	*	*	*	*MODEL	*	* COGNIZANT	* BASIC
TEST	*	* CONFIGURATIONS	* TEST	* TYPE OF	* SCALE	* TESTING	* TEST DMS	*PUBLICATION
ID	* REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RANGE	* AGENCY	* PERSONNEL	*OR COMMENTS
LARC	- *MATED AERODYNAMI	C*747 ALDNE	*TO INVESTIGATE	TH*FORCE	*O 0400 .	+BOEING /	*R D KNUDSEN/TH	E *DMS-DR-2290
	- *CHARACTERISTICS					*LARC -	*BDEING CO.	*VOLUME 01
129	/*INVESTIGATION FO						T*J LOUISSE AND J	H*NOV , 197
CA8		*47/ORBITER-ALT		*			W* WALTER/THE BOE	
	41*747 CAM AND THE		*GROUND PROXIMIT	Y *		*IND TUNNEL	*G CO.	*
	*.0405 SCALE SPAC		*ON THE CONFIGUR	AT*	*	*	*D A. SARVER	*
	*SHUTTLE ORBITER	*	*IONS TESTED	*	*	*	∗G. W. KLUG	*
	*IN THE NASA LANG	GL*	*	*	*	+	*-DMS	*
	*EY V/STOL TRANSI	ET*	*	*	*	*	*	*
	*ION RESEARCH WIN	ND*	*	*	*	*	*	*
	*TUNNEL	*	*	*	*	*	*	*
	*	*	*	*	*	*	*	*
	- *MATED AERODYNAMI		*TO INVESTIGATE			*BOEING /	*R.D KNUDSEN/TH	
	- *CHARACTERISTICS					*LARC -	*BOEING CO.	*VOLUME 02
129	/*INVESTIGATION FO						T*J LOUISSE AND d	
CA8		+47/ORBITER-ALT C		*			W*.WALTER/THE BOE	:IN*
CR-147,6	42*747 CAM AND THE	-	*GROUND PROXIMIT	-	*	*IND TUNNEL	*G CO.	- <b></b>
	* 0405 SCALE SPAC		*ON THE CONFIGUR	AT*	*	*	*D. A SARVER	**
	*SHUTTLE ORBITER		*IONS TESTED	*	*	*	*G. W KLUG *-DMS	т -
	*IN THE NASA LANG		*	*	*	*	*-DM2	<b>↑</b>
	*EY V/STOL TRANSI		*	*	*	ж ъ	* *	*
	*ION RESEARCH WIN *TUNNEL	4Ω*	*	*	*	T	*	*
	* IUNNEL	*	* *	τ •	* •	*	*	*
LARC	- *MATED AERODYNAM	******* A1 ONE	*TO INVESTIGATE	TU*EUDCE	*0.0400 .	*BOEING /	*R.D KNUDSEN/TH	IE *DMS-DR-2290
	- *CHARACTERISTICS	<del></del>				*LARC -	*BOEING CO	*VOLUME 03
129	/*INVESTIGATION FO						IT*J.LOUISSE AND .	
CA8		*47/ORBITER-ALT		*			W* WALTER/THE BOE	
–	43*747 CAM AND THE		*GROUND PROXIMIT	v *	<b>u</b>	*IND TUNNEL	*G CD	*
J., 1.47,10	* 0405 SCALE SPAC		*ON THE CONFIGUR		*	*	*D. A SARVER	*
	+SHUTTLE ORBITER		*IONS TESTED.	*	+	+	*G W KLUG	*
	*IN THE NASA LANG		*	*	*	*	*-DMS	*
	*EY V/STOL TRANS		*	*	*	*	*	*
	*ION RESEARCH WIN		*	*	*	*	*	*
	*TUNNEL	*	*	*	*	*	*	*
	*			*	*	*	*	*

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					/IW	ID TUNNEL T	EST /	DMS DATA	PROCESSIN	 G				241
	*	~		*	*	*****	 *	TYPE OF	*MODEL	* LE* TESTIN	*	COGNIZANT TEST DMS	* BASIC	
TEST ID	*		TITLE	* CONFIGUR/ * TEST		TEST PURPOSE	*	TEST		GE* AGENCY		PERSONNEL	*OR COMME	
LARC	- *		:	*	*		*	FORCE	*	*LARC	/ *D - *-D	B WATSON	*DMS-DR-2	2292
LTPT	- *		:	*	*		*		*	*LARC *LOW~TURB		NIS	* 10 LKC	
214	/*			*	**		*		*	*PRESSURE			*	
LA36B	*			*	*		*		*	*EL	*		*	
	*			*	*		*		*	*	*		*	
AEDC	- +	RESULTS	OF TESTS	*MODEL 75-0	S {72-*T0	OBTAIN PR	*IMIXO	FORCE	<b>*0 010</b>	/ *ROCKWELL	/ ∗J.	J DAILEDA, d	*DMS-DR-2	2293
SWTA				*0 WING, 140					*4.5 -	<b>*AEDC</b>	- *MA	RROQUIN/RI	*DEC ,	1977
K1A	/*	LE SSV M	ODEL 75-0	⊁FUSELAGE, I	T. SR *N1	DATA FOR	ET AN∗		*			E VAUGHN	*	
IA40	. *	TS IN TH	E AEDC VK	+B)	<b>+</b> D	SRB WITH S	RB SE*		*	*D TUNNEL	• •	M MOSER JR	*	
CR-151,	381+	F TUNNEL	Δ :	*		TOM NOITAR	DR PL*		*	*	*-D	MS	*	
	*			*		IE EFFECTS	*		*	*	*		* *	
	*			*	*	OFFILE AND	*	FOROF	* 0.0405	/ +ROCKWELL	/ +00	T. HUGHES/RI	*DMS-DR-2	2201
NRLAD	- *	RESULTS	OF TESTS	*140A/B SS ( *(MODEL 43-0	)KRITEK*IC	DEFINE AN	CTADI+	PORCE		*NRLAD	,	W HERSEY	*VOLUME (	
LSWT				*(MODEL 43-0 *ITER FERRY					* 0 26	*LOW SPEE	_		*JUNE.	1981
752 DA 172			R PERRI C TION USIN			ARACTERIST			* 0 20	*TUNNEL	*-D		*	
			/B 0.0405			TH IN AND	,		*	*	*		*	
GIC 100,	-		ODEL (43~			THE PRESEN			*	*	*		*	
			E ROCKWEL			E GROUND,			*	*	*		*	
		•	ATIONAL 7			E FERRY CO			*	*	*		*	
	*	75 X 11	FOOT LOW	*	*UF	ATION AFTE	RBODY*		*	*	*		*	
	+	SPEED WI	ND TUNNE	*	* 11	ISTALLED	*		*	*	*		*	
	*	L (OA172	)	*	*		*		*	*	+		*	
	*			*	*		*		*	*	*	T	*	1004
NRLAD	- *	RESULTS	OF TESTS	*140A/B SS (	RBITER+TO	DEFINE AN	D VER+	FORCE	+ 0 0405 ,		•	T. HUGHES/RI	*DMS-DR-2 *VOLUME (	
LSWT	- *	OF A SPA	CE_SHUTTL	*(MODEL 43-0	)) ORB *IF	Y ORBITER	STABI*	PRESSURE	*0 13 - * 0 26	*NRLAD *LOW SPEE		W HERSEY	*JUNE.	1981
752				*ITER FERRY					* 0 20	*TUNNEL	#-D +-D		*	100 .
OA 172			TION USIN			ARACTERIST OTH IN AND			* *	* 1014455	*	P1 G	*	
CK-160,			/B O O405 ODEL (43-			THE PRESEN			*	*	*		*	0.0
			E ROCKWEL			IE GROUND,			*	*	*		*	Ŧ à
		,	ATIONAL 7			E FERRY CO			*	*	*		*	100 G
			FOOT LOW			ATION AFTE			*	*	*		*	POOR
			ND TUNNE			ISTALLED	*		*	*	*		*	ŌŚ
		L (OA172		*	*		*		*	*	*		*	OF POOR
	*	•		*	*		*		*	*	*		*	
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				<b></b> -	WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING					242
		*	*		*	~~~	*		*MODEL	 -	*	*	COGNIZANT	* BAS	IC
TEST		*		CONFIGURATIO				TYPE OF			* TESTING		TEST DMS		
ID		* REPORT TITL	⊨ * 	TESTED	* 	PURPOSE	*	TEST	*MACH	RANG	E* AGENCY	* ·	PERSONNEL	*OR COM	MEN 15
			*****	- 41 ONE - 704	. 4 ~			TO441		- /	**************************************		II DVF (DOCK)	WELL ADMC-DD	
AEDC SWTA		*RESULTS OF AN *ESTIGATION OF							\$*0.017 *3.01		*RUCKWELL/ *AEDC -				
14A		*SPACE SHUTTLE					_		*4.01		*SUPERSONIC				
H41B		*TEGRATED VEHI				HEAT-TRANSFE			*		+D TUNNEL (A		11. 110117 AND	*	, , , ,
—		*AERODYNAMIC H									*	*D	A SARVER	*	
	-	*NG CHARACTERI							* *		<b>+</b>		W. KLUG	*	
		*S OBTAINED US				VEHICLE DURI			*		*	*-D	MS	*	
		*THE 0 0175-SC	ALE *		*THE	ASCENT PHAS	E +		*		+	*		*	
		*MODEL 60-OTS	IN A*		*OF	: ASCENT PHAS ITS FLIGHT F	*0R		*		*	*		*	
		*EDC TUNNEL A !	URI*		*FIL	.E	*		*		+	*		*	
		*NG TESTS IH411	3 *		*		*		*		*	*		*	
		*	*		*		*		*		*	*		*	
EDC		*RESULTS OF AN									*ROCKWELL/		H DYE/ROCK		
WTA		*ESTIGATION OF							*3 01		*AEDC -		ITERNATIONAL		
4A		*SPACE SHUTTLE							*4 01		*SUPERSONIC		W. NUTT/ARU	INC*SEPI.,	1977
H4 1B		*TEGRATED VEHI				HEAT-TRANSFE			*		*D TUNNEL (		4 645455	*	
R-151,	070	)+AERODYNAMIC H							* * *		*		. A SARVER . W KLUG	*	
		*NG CHARACTER!							*		*		MS	*	
		*S OBTAINED US:		23134V8W116					* .⊾		*		CINIC	*	
		*THE 0.0175-SC/				E ASCENT PHAS ITS FLIGHT F			T.		*	•		*	
		*EDC TUNNEL A I			*UF *FIL		'KUT		1		*	*		*	
		*NG TESTS IH41			*****	.6	*		*		*	*		*	
		*	*		*		*		*		*	*		*	
\EDC	_	*RESULTS OF AN	TNV+F	T ALONE T34	 *Δ 1	HIN-SKIN THE	RM*I	HEAT-TRAN	S*0.01	75 /	*ROCKWELL/	*W	H. DYE/ROCK	WELL*DMS-DR	-2295
SWTA		*ESTIGATION OF							*3 01		+AEDC -		<b>ITERNATIONAL</b>		
4A		*SPACE SHUTTLE							*4.01		*SUPERSONIC	WIN*K	W NUTT/ARD	INC*SEPT ,	1977
H4 1B	•	*TEGRATED VEHI	CLE *8	3W116	*IN	HEAT-TRANSFE	R *		*		*D TUNNEL (/			*	
R-151,	071	+AERODYNAMIC H	EATI*C	RBITER + TAN	K B6*DAT	A ON THE SPA	CE*		*		*		. A SARVER	*	
		*NG CHARACTERIS	STIC+2	2C12E52F10M16	R185*SHL	ITTLE INTEGRA	T *		*		*		W KŁUG	*	
		*S OBTAINED US	ING *2						*		*	*-[	OMS	*	
		*THE O 0175-SC			*THE	ASCENT PHAS	SE *		* * * *		*	*		*	
		*MODEL 60-OTS							*		*	*		*	걸 낮
		*EDC TUNNEL A 1			*FII	.E	*	•	*		*	*		*	
		*NG TESTS IH41	8 *		*		*		*		*	*		*	70 ½
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					WINE	TUNNEL '	TEST /	DMS DATA	PROCES	SING	<b></b>				24
	 k		*		*		*		+MODEL	_	*	*	COGNIZANT		_
TEST	*		*	CONF I GUR	ATIONS +	TEST	*	TYPE OF		-	▼ TESTING	*			ICATION
ID	4	REPORT TI	TLE *	TEST	ED *	PURPOS	E *	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR C	OMMENTS
EDC		RESULTS OF	ANI TNIV±E	T ALONE	T3/1 *A 7	HTM-SKTN	THERM*H	FAT-TRANS	5*0 017	75 /	*ROCKWELL/	*W	H DYE/ROCK	VELL*DMS-	DR-2295
WTA	×	ESTIGATION	OF THE*C	DERITER ALL	ONE BE+DC	HPLE TES	T WAS *		*3.01	_ ′	*AEDC -		TERNATIONAL	*V0LU	
4A		SPACE SHUTT							*4.01		SUPERSONIC	WIN*K	W. NUTT/ARO	INC*OCT	. 197
H41B		TEGRATED VE			*IN				*		*D TUNNEL (A	* (	•	*	
		AERODYNAMIC							*	:	k	*D	A SARVER	*	
. ,		NG CHARACTE							*		+	+G.	W KLUG	*	
		S OBTAINED				VEHICLE I			*		۲	*-D	MS	*	
		THE 0 0175-			+TUS	ACCEMT 1	DD176E +		*	;	+	*		*	
		MDDEL 60-0T			*0F	ITS FLIG	HT PRO*		+		*	*		*	
	*	EDC TUNNEL	A DURI*		*FIL		*		*	;	*	*		*	
		NG TESTS IH			*		*		+	1	<del>r</del>	*		*	
	4		*		*	,	*		*	,	k	*		*	
EDC	- 1	RESULTS OF	AN INV+	ET ALONE	T34 *A 7	HIN-SKIN	THERM*H	EAT-TRANS	S*O 017	75 /	*ROCKWELL/	*W	H DYE/ROCKI		
/TA		ESTIGATION							*3 01	- :	*AEDC -		TERNATIONAL		
4.4	74	SPACE SHUTT	LE IN *2	2C12E52F10	M16R18V*CON	DUCTED TO	D OBTA*		*4 01	:	*SUPERSONIC	WIN*K	W. NUTT/ARO	INC*OCT	, 197
141B		TEGRATED VE				HEAT-TRAI			*	;	D TUNNEL (A			*	
		<b>AERODYNAMIC</b>			TANK B6*DA1	A ON THE	SPACE*		*	;	*		A. SARVER	*	
	٠.٠	NG CHARACTE	RISTIC+2	2C12E52F10	M16R185*SHL	TTLE INT	EGRAT *		*	:	*		W KLUG	*	
		S OBTAINED							*	:	k	*-D	MS	*	
		THE 0 0175-				ASCENT 1	PHASE *		*	:	k	*		*	
	k	MDDEL 60-OT	S IN A*		*0F	ITS FLIG	HT PRO*		*		+	*		*	
	4	EDC TUNNEL	A DURI*		+FIL	.E	*		*		<b>k</b>	*		*	
		NG TESTS IH			*		*		*	:	k	*		*	
	×		*		*		*		*		k	*		*	
ARC	- 4	SHUTTLE MOD	EL TAI*	03614-SCA	LE ORBI*TO	DETERMIN	E THE *P	RESSURE	* .036	514 /	+LARC /		RNARD SPENCE		
TPT	- *	LCONE PRESS	URE DI*7	TER MODEL	OF A O8+SEM	SITIVITY	OF TH*		* 20	-	+LARC →		RGE M WARE,		
29	11	STRIBUTION	AT LOW+9	B CONFIGU	RATION *E T	AILCONE	TO CHA*		+ 30		+LOW-TURBULE				ST, 197
A81	k	SUBSONIC SP	EEDS +V	VITH A 139	B CONFI*NGE	S IN REY	NOLDS *		*				H LINDAHL	*	
R-147,	609	OF A O 0361	4-SCAL+C	BURATION N	OSE FOR+NUM	IBER, DETE	RMINE *		*		+EL	*-D	MS	*	
	4	E MODEL IN	THE NA+	WARD OF F	S. 500.*THE	PRESSUR	E DIST*		*	,	+	*		*	
		SA/LARC LOW				OTION OV	_		*	1	*	*		*	
	4	LENCE PRESS	URE TU*			LCONE FO			*	•	+	*		*	
	*	NNEL (LAB1)	. +			TURAL DES			*	•	*	*		*	$\circ$
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	*		*			REE TYPES			*	•	*	*		*	ORIGINAL OF POOR
	+		*			TUNNEL M			*		₹	*		*	X A
	۲		*			ECHNIQUE			*		<b>+</b>	*		*	
	4		*		· -	TAILCONE	*		+		<b>+</b>	*		<b>**</b>	O TO
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					WIND	TUNNEL	TEST /	DMS DAT	A PROCESSIN	IG			. <b></b>		244
	-,	<b>k</b>	*		*		×	·	*MODEL	*		*	COGNIZANT	*	BASIC
TES	Γ,	,	*	CONFIGURATION	DNS *	TEST	, *	TYPE 0	F * SC/	LE*	TESTING	* 1	EST DMS	*PL	BLICATIONS
ID		REPORT TIT	LE * 	TESTED	*	PURPOS	E *	TEST	*MACH RAN	1GE∗	AGENCY	*	PERSONNEL	*OR	COMMENTS
LARC	- *	SHUTTLE MODE	L TAI*	.03614-SCALE	OT*IBRO	DETERMIN	IE THE 1	PRESSURE	* .03614	/ *1.	ARC /	*BERN	ARD SPENCE	R.G*DN	IS-DR-2296
LTPT				TER MODEL OF					*.20 -		ARC -		E M. WARE/		
229	/ *	STRIBUTION A	T LOW*	9B CONFIGURAT	ION *E T.	AILCONE	TO CHA	¢ .	*.30	*1_	OW-TURBULENC	E*C		*AL	GUST, 1976
LA81				WITH A 139B C					*	*P	RESSURE TUNN	*R 1-	LINDAHL	*	
CR-147	610	OF A 0.03614	-SCAL*	GURATION NOSE	FOR*NUM	BER, DETE	RMINE 4	•	*	<b>≁</b> E	L	*-DMS	;	*	
				WARD OF F.S	500 *THE	PRESSUR	E DIST	•	*	*		*		*	
		SA/LARC LOW				VO NOITU			*	*		*		*	
		LENCE PRESSU	RE TU*			LCONE FO			*	*		*		*	
	•	NNEL (LA81)	*			URAL DES			*	*		*		*	
	*	<b>t</b>	*			SES, AND			*	*		*		*	
	*	<b>t</b>	*			INE THE			*	*		*		*	
	*	•	*			NCE EFFE			*	*		*		*	
	3	<b>K</b>	*			EE TYPES			*	*		*		*	
	*	<b>K</b>	*			TUNNEL M			*	*		*		*	
	7	<b>K</b>	*			ECHNIQUE	-		*	*		*		*	
		K	*			TAILCONE		•	*	*		*		*	
LARC	7	Hitoit cunches	*	15440	*		×		*	*		*		*	
UPWT		HIGH SUPERSON				ABLISH G				/ *L			WARE, B.		
1145		ERODYNAMIC C		TELET SMEEN		FOR LINE			*2 36 -		ARC -		R/LARC	*NU	ov , 1976
LA45A/	•	*TERISTICS OF *IRREGULAR PL				OF ORBI			*3 7		NITARY PLAN			*	
		RM WINGS WITH				YNAMIC C	HARACI		**	*1	ND TUNNEL		WATSON	*	
CK-147		TEMATICALLY			*EK1	STICS	7		*	*		*-DMS	•	**	
		NG WING FILL			**		7		*	*		<b>*</b>		*	
		OMETRY TESTER			*		,		*	*		* .t.		*	
		THE NASA/LAR								-7÷		* *		<i>-</i> 7 ±	<u> </u>
		OOT UPWT (LE			*		2	•	*	* -		*		<b>.</b>	- 11
		(LA45A/B)	G 2) ^		•		3	`	<b>*</b>	Ī		* •		*	~ 50 €
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POOR QUALITY

						WI	ND TUN	NEL TEST	/	DMS DATA	PROCES	SING		. <b></b>			2
		,		 +		*			*		*MODE!	- -	*	*	COGNIZANT		BASIC
TEST	*	•		*	CONFIGURATIO	_		TEST		TYPE OF		_	* TESTING	*	TEST DMS		UBLICATIO
ID	k 	REPORT T	ITLE	*	TESTED	*	, Pl	JRPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*0	R COMMENT
					V CORTTER M	nn=+ . +	- DET		سايد ف	onor.	*0 045	. ,	*LARC /	*85	RNARD SPENCER/	'Larne	MC_DD_220
RC PT		TOW SPEED			V ORBITER MO			ERMINE LUV STABILITY		URCE	*0 015 *0 25		*LARC -	*AR	•		AY. 19
7		ARACTERIST			. •	_	-	TROL CHAR			+0 25		*LOW-TURBULENCE		· ·	*	
, PT		A 0 015 SC					_	CS OF TH			*		*PRESSURE TUNN			*	
3		EL 69-0 OF						SHUTTLE OF			*			*-D		*	
73A		ACE SHUTTL				_		TH FOREBO			*		*LOW-TURBULENCE	-		*	
3B		ER WITH FO						MODIFICAT:			•		*PRESSURE TUNN			*	
						*N		MODIFICAT:	ıu [,]		 •		*EL	*		*	
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		LOW TURBUL							T.		т -			· ·		*	
		ESSURE TUN	NEL (LA	*		*			·*		4		r 	т ъ			
		73A/B)	:	*		*			- AT		•		4	<u>.</u>			
_			*DT1 YTV	*	DITCO/242 C	# CDDV.ati	0 145 4 6	TUDE DITO	יד מער לו	nner	*0.015	. /	*LARC /	*0	C. FREEMAN. J	יח*פו	PCC-971-2M
C					BITER/747 FE	EKKY*I	U MEAS	SUKE PIICI	η, <b>γ</b> Γ	UKUE	*0.018		*LARC -		R. P BOYDEN/		
		CHARACTERI			HICLE			OLL DAMPI					*HIGH SPEED 7 E			T.40	UNE, 15
_	,	OF THE COM					•	MAL FORCE			*0 5		*HIGH SPEED / 0				
0		N SPACE SH						TITCH RATE			*			*~D			
Χ		ORBITER AN		*				VING MOME			# -#-		*EL	* ~U	IVI Q	т т	
3497	×	COMBINATIO	N .	*				ROLL RATI			*		# 	*		-T	
	*	•		*				LING MOM			*		*	*		-	
	1	*		*				TO YAW RA	A   *		*		*	<b>₹</b>			
	4	•		*		*E			*		*		*	*		* 	
	*	•		*		*			*		*	_ ,	*	*	00 THORD 18	· *	ua DD 000
!C					OA/B/C (B26					ORCE	*0 015	•	*LARC /		SPENCER. JR .		
T					3 F8 M16 N28						*0 15		*LARC -		WARE/LARC	****	CT , 19
	_ / ч	CHARACTERI	STICS	*V8	( W )			ASE FOR CL			<b>*0.25</b>		*LOW-TURBULENCE			*	
1B	×	OF A O 015	-SCALE	*				SS CONFIG	JR*		*		*PRESSURE TUNN	*-D	MS	*	
147,	629	REMOTELY C	ONTROLL	*		* A	TION		*		*		*EL	*		*	
	*	ED ELEVON	MODEL (	*		*			*		*		*	*		*	
	×	*44-0) OF T	HE SPAC	*		*			*		*		*	*		*	2
	*	E SHUTTLE	ORBITER	*		*			*		*		*	*		*	į
	×	IN THE LAN	GLEY R	*		*			*		*		*	*		*	
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					WIND	TUNNEL TEST	 /	DMS DATA	PROCES	SING								246
	*		*		*		*		*MODEL	~	*		 *	COG	 NIZANT	*	BASI	 C
TEST		DEDOD#	*	CONFIGURATIONS		TEST		TYPE OF				STING	*	TEST	DMS			TIONS
ID	*	REPORT TITLE	*	TESTED	* 	PURPOSE	* 	TEST	*MACH	RANGE	* AG	SENCY	* 	PER	SONNEL	*0R	COMM	IENTS
AEDC	~ +E	) E C       T C   O E   D L A	CE +M	10DELC 90-4	4TO D	ETPONING THE		IFAT TRANS		. ,	* B00l	44.07.1.7			v= /a.t		a DB	0001
HWTB				NODELS 82-1, ~3, 5, -8, -11, ALL					**************************************		*AEDO				YE/RI , d. carv			·2301 1976
82A				O PERCENT FOREBO					*8.00			RSONIC WI			, D. OAK.	*	• •	1570
0H54A		ILIZING O 040				ON BOUNDARY			*			INNEL (B)			ARVER	*		
CR-144,	605 * 4	LE 50 PERCENT	F0+		*AYER	TRANSITION	*		+		*	(-,			DSER JR.	*		
	* F	EBODY MODELS	(ND+		*		*		*		*		*-D			*		
		82-0) OF THE			*		*		*		+		*			*		
		KWELL INTERNA			*		*		*		*		*			*		
		IAL SPACE SHUT			*		*		*		*		*			*		
		RBITER IN AED	_		*		*		*		+		*			*		
		KF HYPERSONIC	TU*		*		*		*		*		*			*		
		NEL B	*		*		*		*		*		*			*		
450	*		*		*		*		*		*		*			*		
ARC				RBITER VEHICLE					*0 36			KWELL/			I/ARC		-	2302
40SWT				1 WITH TAIL CONE				RESSURE	*0 114	-	*ARC	. <u>.</u>			UBALA/R.I			
479	/*E	MUDEL(76-U)	UF *U	RBITER VEHICLE	* MOI	MENT AND CON	T*		*0 264			OOT BY 80				*MA	Υ,	1982
OA174	* 1 * 4 0 4 0	HE SPACE SHUT	ILE*O	1 WITH OUT TAIL					*			SUBSONIC			DWARDS	*		
נאי ושון,		RBITER VEHICL				T DATA; VER			*		*WIND	TUNNEL	*-D	MS		*		
		O1 IN THE NAS				AND MEASURE			*		*		*			*		
		ES RESEARCH C R'S 40 X 80 S				NG GEAR STRU			*		*		*			*		
		NIC WIND TUNN				DOOR PRESSUR			*		*		*			**		0.0
		0A174)	16 L 7			DBTAIN TAIL Pressure dis			<u>*</u>		T		- <b>7</b> -			* •		유었
	*	0,71147	*			TIONS, CALIB			T		•		Ţ			±		- C
	*		*			BASELINE AND			<b>.</b>		·		<b>*</b>			- -		7 5
	*		*			RNATE AIR DA			*		*		-T-			*		S
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							WIND	TUNNEL TES	 т /	DMS DATA	PROCES	SING					2
		*		*			*		*		*MODEL		*	*	COGNIZANT		BASIC
TEST	Γ	*		*	CONFIGUR		*	TEST	*	TYPE OF TEST			* TESTING * AGENCY	*	TEST DMS PERSONNEL		BLICATION COMMENT:
ID		*	REPORT TITLE	. <del></del> .	TEST	EU	* 	PURPOSE		1531		KANGE	. AGENCI	<del>-</del>			
			- <b></b>														
ARC	-	*R	ESULTS OF TESTS	*0	RBITER VE	HICLE	1+0BTA	IN STABILI	TY *F	ORCE	*0936	•	*ROCKWELL/		L MAKI/ARC		S-DR-230:
40SWT	-	+0	SING A 0.36-SCAL	۰,	H WITH TA	IL CON	E*AND	CONTROL FO	RCE*P	RESSURE	*0 114		+ARC -		J DZIUBALA/R		
479	/	/ * E	MODEL(76-0) OF	+0	RBITER VE	HICLE	1*, MC	MENT AND C	ONT*		+0 264	7			R HOULIHAN R. EDWARDS	*M∆ *	Y, 19
OA 174		*T	HE SPACE SHUTTLE	.*0	H WITH OU	TAIL	*RUL	SURFACE HI	NGE *		*		*WIND TUNNE			*	
CR-167,	, 34		RBITER VEHICLE		ONE			NT DATA; V AND MEASUR			*		* M TIAD   DIAIAE	L + D	13	*	
			O1 IN THE NASA/A					NG GEAR ST			*		*	*		*	
			ES RESEARCH CENT R'S 40 X 80 SUBS					DOOR PRESS			*		*	*	,	*	
			NIC WIND TUNNEL					OBTAIN TAI			*		*	*		*	
			DA174)	*				PRESSURE D			+		*	*		*	
		*	UA 1747	*				TIONS: CAL			*		*	*		*	
		*		*				BASELINE A			*		*	*		*	
		*		*				RNATE AIR			*		*	*		*	
		*		*			*A SY	STEMS	*		*		*	*		*	
		*		*			*		*		*		*	*		*	
AEDC	-	*R	ESULTS OF PHASE	*M	ODELS 82-	1, -4,	*T0 E	ETERMINE T	HE *H	EAT-TRAN	S*0.030	) /	*ROCKWELL/		H. DYE/RI		IS-DR-230
HWTB	-	*C	HANGE PAINT TEST	+5	O PERCENT	FOREB	D*EFFE	CTS OF SIM	ULA+		*8	-	*AEDC -		CARTER/ARO	*MA	Υ, 19
E3A	/	/*5	OF O O4O SCALE	*D	IES			RCS NOZZLE	•		*8		*HYPERSONIC			*	
0H75			O PERCENT FOREBO					UBERANCES,			*		*D TUNNEL (		M MOSER JR	*	
CR-144,	618		Y MODELS (82-0)					NETRATIONS			*		*	∗-DI	VIS	*	
			F THE SPACE SHUT					DYNAMIC HE			*		*	*		~ ±	
			LE ORBITER IN TH					RATES DURI			*		<i>↑</i>	τ •		*	
			AEDC VKF 'B' HY					LATED ENTR	Y G*		* 		*	·		*	
		-	ERSONIC WIND TUN	]+			*0001	TIONS	*		*		*	*		*	
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100		Ψ .a.tπ	ESULTS OF TESTS	* т	ATI CONE-C	N	.Tn t	VALVATE MO	nei *#	OPCE	*0 030		*ROCKWELL/	*R	L. GILLENS,	T. *DN	IS-DR-230
ARC 12PT			O EVALUATE ARC 4		AT LCOINE - C	14		ORT SYSTEM			* 26		*ARC -		DZIUBALA, R.		V . 19
180-1			K80-FOOT TUNNEL					FOR TEST		KESSOKE	* 26				MULFINGER/R		-
0A173	′		UPPORT STRUT TAR					THIS TEST			*	-	*RE TUNNEL	*C.	R EDWARDS	*	
	846		S ON THE SPACE S					1 40X80 FOO			*		*	* - D1	MS	*	
OK 100,	, 0 ., 0		UTTLE VEHICLE WI					S AND WIND			*		*	*		*	
			H TAIL CONE USIN				*ELDS	UO DNA NI	T T*		*		*	*		*	
			A O O3-SCALE MC				*0 DE	TERMINE TH	EIR*		*		*	*		*	0
		*[	EL (45-0) IN THE	*			*EFFE	CT ON THE	ORB*		*		*	*		*	, tu
		+1	ASA/ARC 12-FOOT	*				R TAILCONE-			*		*	*		*	יו סד
		*P	RESSURE WIND TU	*			*CONF	IGURATION	*		*		*	*			O 5
		*/	NEL (0A173)	*			*		*		*		*	*		<b>*</b> ₹	OF POOR
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TEST ID	;	k k k REPOR	RT TITLE	* *	CONFIGURATIONS TESTED	* * *	TEST PURPOSE		TYPE OF TEST		SCALE	* * TESTING * AGENCY		* *	COGNIZANT TEST DMS PERSONNEL	* 8A *PUBLI *OR CO	CATION
V WT 3 76 - 151,(	- - - - - - - - - - - - - - - - - - -	*BER TRA *BILITY *L CHARA *OF A O *REMOTEL *ED ELE\ *44-O OF *SHUTTLE	EYNOLDS NANSONIC S AND CONT ACTERISTI O15 SCAL Y CONTRO ON) MODE THE SPA E ORBITER	TA*5 TRO* (CS* LE(* LL* LL* LCE*		*YNO *NSO *C D *SUR *AND *TO *R F *BRA	LDS NUMBER TR NIC AERODYNAM ATA ON CONTRO FACE LINEARIT SENSITIVITY MACH NUMBER F INE-CUT SPEED KE, BODY FLAP	A* II* IV* * * * * * * * * * * * * * * *		*0 01! *0 6 *2 9 * *	-	*LARC // *LTV /* *HIGH SPEI *D TUNNEL /* * *	-	*-D1	M MANN MS	*DMS-D *VOLUM *JUNE, * *	E 01
	2 2 2 2 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	HIGH SF (LA76)	PEED TUNK	# * * * * *		*T10 *GAT *ACT *MUT *URF *S	RUDDER DEFLE NS, TO INVEST E THE INTER- IVE EFFECTS O UAL CONTROL S ACE DEFLECTIO	*** F** N**		* * * * * * * * *		* * * * * * *		* * * * * * * *		* * * * * * * * *	
T 6 151,0	060	PBER TRAPERS TO THE PERSON TO THE PERSON TELEVISION TO THE PERSON TO THE	ANSONIC S AND CONT ACTERISTI O15 SCAL Y CONTRO ON) MODE THE SPA CORBITER N THE VS	TA*5 RO* CS* E(*) LL* CE* CF*		*YNO *NSO *C D *SUR *AND *TO ! *R F *BRA! *AND	LDS NUMBER TR NIC AERODYNAM ATA ON CONTRO FACE LINEARIT SENSITIVITY MACH NUMBER F INE-CUT SPEED KE, BODY FLAP RUDDER DEFLE	A* IL* IL* O * C*		*0 019 *0 6 *2 9 * * * * *	- ·	*LARC * *LTV * *HIGH SPEI *D TUNNEL * * * * *	V - -	*M. *-Di !* * * * * *		*DMS~D *VOLUW *JUNE, * * * * * *	1E O2
		HIGH SP	PEED TUNN	* * * * * * * *		*GAT *ACT *MUT	NS; TO INVEST E THE INTER- IVE EFFECTS O JAL CONTROL S ACE DEFLECTIO	*  F*		* * * * * *		*		* * * * * *		* * * * * * *	OF POOR QUALIT

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TEST ID	* * *	REPORT TITLE	* * *	CONFIGURATIONS TESTED	* *	TEST PURPOSE		TYPE OF TEST	+MODEL * S +MACH R	CALE		* * *	COGNIZANT TEST DMS PERSONNEL	*PUBLI	SIC CATIONS MMENTS
ARC -167,35  ARC -167,35  ARC -167,35  ARC -167,35  ARC -167,35	**************************************	N THE SPACE SHULE LAUNCH CONFIRATION USING THE OG SCALE MODEL TOOK AND THE NAMES UNITARY AN WIND TUNNEL A 135A/B/C)  ESULTS OF TESTS AT THE NAMES UNITARY AND WIND TUNNEL TOOK SCALE MODEL TOOK STATE OF TESTS AT THE SPACE SHULE LAUNCH CONFIRATION USING THE TOOK SCALE MODEL TOOK STATE OF TESTS AT THE SPACE SHULE LAUNCH CONFIRATION USING THE TOOK STATE OF THE NAMES UNITARY	TGE	- AT28AT29AT30/ 31AT32AT128FL10/ 11FR10PT22PT23PY 4PT25PT26PT27T3' - N86521PS13PS PS20PS21PS22PS2: 524PS25PS26 - B26C9E44F9M16' - AT28AT29AT30/ 31AT32AT128FL10/ 11FR10PT22PT23P' 4PT25PT26PT27T3' - N86S21PS13PS PS20PS21PS22PS2: 9 - B26C9E44F9M16' 5V8W116 - AT28AT29AT30/ 15V8W116 - AT28AT29AT30/ 15V8W116 - AT28AT29AT30/ 11FR10PT22PT23P' 4PT25PT26PT27T3' - N86S21PS13PS	*IS T: **TAIN **TRIBI ***TAIN ***TAIN **EVON **MENT **TAIN ****TAIN ***TAIN **TAIN ***TAIN ***TAIN ***TAIN ***TAIN ***TAIN ***TAIN ***TAIN ***	EST WAS TO COUNTY OF THE PRESSURE DISTRICT OF	DB*PP IS* IV* L* ISS* ** IDB*PP IDB*PP IS* ** IDB*PP IS* IV* IV* IV*	DRCE RESSURE	*0 0300 +1 55 - +2 20 * * * * * * * * * *0.0300 *1.55 - * * * * * * * * * * * * * * * * * * *	,	*TARY WIND *EL  * * *ROCKWELL/ *ARC *11-FOOT, *T, 8-FOOT *TARY WIND *EL  * * * * * * * * * * * * * * * * *	9-F00*N , TUNN*  **  **  9-F00*N  **  9-F00*N  **  9-F01**  9-F01**  9-F01**  9-F01**  9-F01**  9-F01**	L KASSNER, J BROWNSON /ARC A. SARVER W KLUG DMS  J HAWTHORNE, R. BURROWS, M	E *VOLUM *MAY,  *  *  *  *  *  *  *  *  *  *  *  *  *	E 01 1982 R-2306 E 02 1982
		A135A/B/C)		PS20PS21PS22PS23		DATA WERE C			* *		* *	* *		* *	ORIGINAL PAGE IS OF POOR QUALITY

							WIND	TUNNEL TE	ST /	DMS DATA	PROCE	SSING					250
TBCA - *RESULTS OF EXPERI*BOEING 747 CAM W/*VERIFICATION OF 7*FORCE		 *		 *			 *		*	<del>.</del> .	+MODE	L	 *	*	COGNIZANT	* BA	SIC
TBCA - *RESULTS OF EXPERI*BOEING 747 CAM W/*VERIFICATION OF 7*FORCE BTWT - *MENTAL AERODYNAMI*TYPE II MODIFICAT*47 CAM W/TYPE II * 496	TEST	*		*	CONFIGURA	TIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLI	CATIONS
### BTWT - **MENTAL AERODYNAMI*TYPE II MODIFICAT*47 CAM W/TYPE II * *0 3 - *TECA **TING **VOLUME 01 ** ** *****************************	ID	*	REPORT TITLE	*	TESTE	D	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR CO	MMENTS
### BTWT - *MENTAL AERODYNAMISTYPE II MODIFICAT*47 CAM W/TYPE II **  1496													~ <b>-</b>				
1496	TBCA	- *5	ESULTS OF EXPER	1+6	BOEING 747	CAM W/	*VERI	FICATION	OF 7*I	FORCE	* 0 0	3 /	*BOEING /		,		
1497	BTWT																-
CA14A	1496	/*0	INVESTIGATION	0*3	ION (MODEL	TR-10	*MOD I	FICATION,	AND*		*0 7					=	1981
CR-160,840+CAM WITH SPACE SH*BITER - ALT CONFI+H ORBITER TAILCON*  **UTTLE ORBITER IN *GURATION	-										*		*TUNNEL			*	
#UTILE ORBITER IN *GURATION * E ON *	CA 14A	*N	ODEL BOEING 747	*	30EING 747	CAM/DR	*CONF	IGURATION	WIT*		*		*	*-	DMS	*	
*THE BOEING *BOEING 747 CAM/OR* * * * * * * * * * * * * * * * * * *	CR-160,	840*0	AM WITH SPACE S	H*E	BITER - ALT	CONFI	*H 0R	BITER TAI	LCON*		*		*	*		*	
** ** ** ** ** ** ** ** ** ** ** ** **		*[	TTLE ORBITER IN	*(	GURATION		*E 0N	1	*		*		*	*		*	
*IC WIND TUNNEL (C*FIGURATION '*		*1	HE BOEING	*	30EING 747	CAM/OR	*		*		*		*	*		*	
#A14A) **ORBITER ALONE LES* * * * * * * * * * * * * * * * * * *						RY CON	*		*		*		*	*		*	
* * * * * * * * * * * * * * * * * * *		* 1	C WIND TUNNEL (	C*I	FIGURATION	•	*		*		*		*	*		*	
# *L 45-0) * * * * * * * * * * * * * * * * * * *		* 5	14A)						*		*		*	*		*	
* * * * * * * * * * * * * * * * * * *		*				(MODE	*		*		*		*	*		*	
## BTWT - *MENTAL AERODYNAMI*TYPE II MODIFICAT*47 CAM W/TYPE II * *0.3 - *TBCA - *ING *VOLUME 02 *1496		*		*	L 45-0)		*		*		*		*	*		*	
## BTWT - *MENTAL AERODYNAMI*TYPE II MODIFICAT*47 CAM W/TYPE II * *0.3 - *TBCA - *ING *VOLUME 02 *1496		*		*			*		*		*		*	*		*	
1496	TBCA									FORCE		•	•				
1497	BTWT																-
CA14A																*SEP1	, 1981
CR-160.841+CAM WITH SPACE SH*BITER - ALT CONFI*H ORBITER TAILCON*  *UTTLE ORBITER IN *GURATION *E ON. *  *THE BOEING *BOEING 747 CAM/OR*  **********************************											*		*TUNNEL			*	
*UTTLE ORBITER IN *GURATION *E ON. * * * * * * * * * * * * * * * * * * *											*		*	*-	DMS	*	
*THE BOEING	CR-160.					CONF I	*H OR	RBITER TAI	LCON*		*		*	*		*	
*8X12 FOOT TRANSON*BITER - FERRY CON*  *							_	١.	*		*		*	*		*	
*IC WIND TUNNEL (C*FIGURATION * * * * * * * * * * * * * * * * * * *		*1	HE BOEING	*	BDEING 747	CAM/OR	*		*		*		*	*		*	
*A14A)		* 8	X12 FOOT TRANSC	IN*	BITER - FER	RY CON	*		*		*		+	*		*	
		*]	C WIND TUNNEL (	C*1	FIGURATION		*		*		*		*	*		*	00
		* #	(14A)	+(	DRBITER ALO	NE LES	*		*		*		*	*		*	77 70
		*		*	S TAILCONE	(MODE	*		*		*		*	*		*	ର
		*		*	L 45-0)		*		*		*		*	*		*	スラ
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	WIND TUNNEL TEST / DMS DATA	A PROCESSING	251
TEST * * CONFIGURATIONS 1D * REPORT TITLE * TESTED	* *  * TEST * TYPE OF  * PURPOSE * TEST	F * SCALE* TESTING * TEST DMS *PUBL	ASIC ICATIONS OMMENTS
CALSPAN - *AN EXPERIMENTAL D*19-OTS  48HST - *ETERMINATION IN T*  181	*TO DETERMINE HEAT*PRESSURE *TRANSFER AND PRE * *SSURE DISTRIBUTIO* *NS IN BASE OF SS * *VEHICLE DURING SI* *MULATED LAUNCH TR* *AJECTORY CONDITIO* *NS OF MACH 4.5 AN* *D PRESSURE ALTITU* *DES BETWEEN 90,00* *O AND 210,000 FEE* *T 6066. HOURS1,* *152	** O 0225	, 1976 DR-2309
*RSI MODIFICATION * *IN THE NASA/LARC *	*ON (RSI) LOCATED * *ALONG THE SIDES O*	* * * * * * * * * * * * * * * * * * *	ORIGINAL OF POOR
*8-F00T TPT (LA72)*	*F THE SPACE SHUTT* *LE ORBITER FUSELA*	* * * * * *	ص <u>م</u>
* * *	*GE FOREBODY *	* * *	ΩŽ
* *	* *	* * *	POOR
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*	*		*		*	*MODEL	_	*		*	COGNIZANT	* BAS	
TEST *	*	CONFIGURATIONS			* TYPE OF			* TESTI		*	TEST DMS	*PUBLIC	
ID * REP(	ORT TITLE *	TESTED	*	PURPOSE	* TEST	*MACH	RANGE	* AGENC	r 	* 	PERSONNEL	*OR COM	MEN12
MSFC - *REENTI	RY STATIC ST*	RIGHT-HAND SRB R	F*TN DF	TERMINE AFRO	*FORCE	*0 00°	548 /	*MSFC	/	*.1	D JOHNSON/MS	F*DMS-DR	-2310
- ,	TY CHARACTER*			IC STATIC ST		+0 4		*MSFC		*C	00///00/17/19	*VOLUME	
640 /*ISTIC:	OF A O 005+		*ABILI	TY CHARACTER	*	+4 45		*14-INCH	TRISON	l∗G.	D. STREBY/NSI	*AUGUST	197
SA14FB +48 SC	ALE MODEL OF*		*ISTIC	S OF SRB REE	*	*		*IC WIND	TUNNEL	.*V.	W SPARKS	*	•
CR-151,083*A RIG	T HAND 146-+		*NTRY	CONFIGURATIO	*	*		*		*M.	M MOSER JR.	*	
*INCH I	DIAMETER SOL*		*N		*	*		*		*-DM	S	*	
*ID RO	CKET BOOSTER*		*		+	*		*		*		*	
+(MSFC	MODEL 486) *		*		*	*		*		*		*	
*REENTI	RY CONFIGURA*		*		+	*		*		*		*	
*TION	AS DETERMINE*		*		*	*		*		*		*	
	A TESTS IN T*		*		*	*		*		*		*	
	5A/MSFC 14-I*		*		*	*		*		*		*	
	RISONIC WIND*		*		*	*		*		*		*	
*TUNNEI	. *		*		*	*		*		*		*	
*	*		*		*	*		*		*		*	
	-	RIGHT-HAND SRB RI				*0 00		*MSFC	/	-	D JOHNSON/MS		
	TY CHARACTER*	ENTRY CONFIG		IC STATIC ST		*0 4		*MSFC	-	*C		*VOLUME	-
•	OF A O 005*			TY CHARACTER		*4 45					D STREBY/NSI		, 197
	LE MODEL OF*			S OF SRB REE		*		*IC WIND	TUNNEL			*	
CR-151,084*A RIG				CONFIGURATIO	*	*		*		*M		*	
	DIAMETER SOL+		*N		*	*		*		*-DN	IS	*	
	CKET BOOSTER*		*		*	*		*		*		*	
· -	MODEL 486) *		*		<b>*</b> c	*		*		*		*	
	RY CONFIGURA*		*		*	*		*		*		**	
	S DETERMINE*		*		*	*		*		*		*	
	TESTS IN T*		*		*	*		*		*		<b>-</b> ₹	
	SA/MSFC 14-I*		*		*	*		*		*		*	
	SISONIC WIND*		*		*	*		*		7F.		ক 	00
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	WIND TUNNEL TEST	/ DMS DATA	PROCESSIN	G		253
				*	* COGNIZANT	* BASIC
* * * CONFIGURATIONS	* * TEST	* TYPE OF	* MODEL	LE+ TESTING	* TEST DMS	*PUBLICATIONS
TEST * * CONFIGURATIONS  ID * REPORT TITLE * TESTED	* PURPOSE	* TEST		GE* AGENCY	* PERSONNEL	*DR COMMENTS
10 * KCFORT ITICE , TOSTED						
LARC - *RESULTS FROM INVE*B58C5E18F4R5V5W8	7*TO INVESTIGATE	TH+PRESSURE	*0 004	/ *LARC /	*JAMES C ELLISON	•
CF4 - *STIGATIONS IN THR*-VEHICLE 2A (MOD.	I*E REAL GAS EFFE	CT*	*5.94 <b>-</b>	*LARC -	*LARC	*AUGUST, 1976
267-268 /*EE NASA/LARC HYPE*FIED)	*S USING A O CO4		+20 30	*FREON TUNNEL	*J W BALL	*
22HT - *RSONIC WIND TUNNE*	*CALE MODEL OF 3		*	*22-INCH HELIU		*
446 /*LS ON A 0.004-SCA*	*THE SPACE SHUTTI	LE*	*	*TUNNEL	*-DMS	*
LA78 *LE MODEL SPACE SH*	*ORBITER	*	*	*	** -t-	* *
LA87 *UTTLE ORBITER (MO*	*	*	<b>.</b>	* 	<u>ጥ</u> - ታ	*
LA88 *DEL 13P-0)TO DET *	*C	* -	*	* •	*	sk
CR-147,620+ERMINE REAL GAS E+	* *	*	* •	* *	** **	*
*FFECTS (LA78, LA8* +7, LA88) *	* *	*	*	*	*	*
+7, LABS) *	*	*	*	*	*	*
AEDC - *RESULTS OF AN INV*VEHICLE 5, TO IN	C*TO ORTAIN HEAT	TR*HEAT-TRANS	5+0 0175	/ *ROCKWELL/	*W H DYE/RI	*DMS-DR-2312
SWTA - *ESTIGATION OF THE+LUDE SRB ALONE AL	N*ANSEER DATA ON	TH*	* 3 0 -	+AEDC -	+K W NUTT/ARO, I	IN*VOLUME 01
J3A /*SPACE SHUTTLE SO *D OTS (SPIKE NOS	E+E SPACE SHUTTLE	S*	* 4 0	*SUPERSONIC WI	N*C	*JUNE, 1977
IH47 +LID ROCKET BOOSTE*ET)	*OLID ROCKET BOO		*	*D TUNNEL (A)	*D. A SARVER	*
CR-151.075*R AERODYNAMIC HEA*	*ER. BOTH ISOLAT		*	+	*C R. EDWARDS	*
*TING CHARACTERIST*	*AND IN THE PRES	E *	*	*	*-DMS	*
*ICS OBTAINED USIN*	*NCE OF THE ORBI	TE*	*	*	*	*
*G THE O O175-SCAL*	*R AND EXTERNAL		*	*	*	*
*E MODEL 60-OTS IN*	*NK, DURING THE	AS*	*	*	*	*
*AEDC TUNNEL A DU *	*CENT PHASE OF I	TS*	*	*	*	*
*RING TESTS IH47 *	*FLIGHT PROFILE	*	*	*	*	*
* *	*	*	*	*	*	*
AEDC - *RESULTS OF AN INV*VEHICLE 5, TO IN			S+0 0175	/ *ROCKWELL/	*W H. DYE/RI	*DMS-DR-2312
SWTA - *ESTIGATION OF THE*LUDE SRB ALONE A			* 3 0 -	*AEDC -	*K W. NUTT/ARO,I	+JULY. 1977
J3A /*SPACE SHUTTLE SO *D OTS (SPIKE NOS			* 4.0	*SUPERSONIC WI *D TUNNEL (A)	*D A. SARVER	*
IH47 *LID ROCKET BOOSTE*ET)	*GLID ROCKET BOO	-	*	*U TOMMEL (A)	+C R EDWARDS	
CR-151,076*R AERODYNAMIC HEA*	*ER. BOTH ISOLAT* *AND IN THE PRES		4	*	*-DMS	OF POOR
*TING CHARACTERIST* *ICS OBTAINED USIN*	+NCE OF THE ORBI		*	*	*	* 7 20
*G THE O.0175-SCAL*	*R AND EXTERNAL		*	*	*	* "চুট্ট
*E MODEL 60-OTS IN*	*NK. DURING THE		*	*	*	* 92
*AEDC TUNNEL A DU *	*CENT PHASE OF I		*	*	*	* 25
*RING TESTS IH47 *	*FLIGHT PROFILE	*	*	*	*	* 70 [**
*	*	*	*	*	*	* 0 77
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						MIND	TUNNEL TEST	· /	UMS DATA	PRUCES	551NG					254
	*		*			*		*		*MODE!	· · · ·	*	*	COGNIZANT	* BAS	SIC
TEST	+		*	CON	FIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBLIC	<u> </u>
ID	*	REPORT			TESTED	*	PURPOSE	*				* AGENCY	*		*OR COM	
RC	a Di		m Littin m.	0075							- /			11 + 444 - 2 - 1 0 0 12	MAADUC DE	3 0040
					SCALE SPACE LE EXTERNAL				EAT-TRANS	**.027: *5.2		*MSFC / *ARC -		LLIAM K. LOCK ARC.	MA +UMS-UH VOLUME*	
15			EAT TRAN*				USED IN THE			*5.3				RRY CARROLL/M		
H14			S ON A *				RATION OF TH			*				H LINDAHL	* 110219012011	, 1571
			E SPACE *				MAL ENVIRON					*NEL	*-D			
K-151,0			XTERNAL *				FOR THE LO			* *		* INE L	* "U	เมอ	<b>→</b>	
								-				τ 	- A		+	
			A 10 DE*				AND TO MORE			*			*		- <b>7</b>	
			DOUBLE C*				RATELY DEFIN			*	,	** -	*		*	
			NOSE IN*				RECOVERY FA			*	,	*	*		*	
			ARC 3 5 *				FOR REDUCIN			*	,	*	*		*	
		YPERSONI	C TUNNE *				HEAT TRANSP			+	;	*	*		*	
	* [		*				FROM FH13			*		4	*		*	
	*		*			*		*		*		*	*		*	
					SCALE SPACE				EAT-TRANS	3* O279	5 /	*SFC /	*WI	LLIAM K LDCK	MA∗DMS-DF	R-2313
5HWT	- *UI	NNEL TES	TS TO DE+	SHUTT	LE EXTERNAL	+ORE	TICAL PREDIC	CT I *		*5 2		*ARC ~		ARC.	*VOLUME	
15	/*TI	ERMINE H	EAT TRAN*	TANK		*ONS	USED IN THE	E G*		*5 3				RRY CARROLL/N	IMA∗MARCH,	, 197
H14	*SI	FER RATE	S ON A *			*ENE	RATION OF TH	-E ∗		*		*SONIC WIND	TUN*R	H LINDAHL	*	
R-151,0	42*0	275 SCAL	E SPACE *			*THEF	MAL ENVIRON	ME*		*		*NEL	*-D	MS	*	
	*S1	HUTTLE E	XTERNAL *			*NTS	FOR THE LOS	2 T*		*		*	*		*	
			A 10 DE*			_	AND TO MORE			*		*	*		*	
			DDUBLE C*				RATELY DEFIN			*		*	*		*	
			NOSE IN+				RECOVERY FA			*		*	*		*	
			ARC 3.5 *				FOR REDUCIN			*		*	*		*	
			C TUNNE *				HEAT TRANS			•		•			*	
	*L		C 101014E +				FROM FH13			sk		*	*		*	
	, L		*			*	FROM FILIS	- 4		т -		•	·			
RC	_ +DI	culte o	T WIND TH	0075	SCALE SPACE		COTEV THE 1	" Filte with	ICATTOANI	י יי מיס	<b>=</b> /	* +SFC /	±1dT	LLIAM K LOCK	MA +DMS-DE	D-0043
									EAT-TRAIN:			•		ARC.	*VOLUMI	
					LE EXTERNAL					*5 2		*ARC -		RRY CARROLL/N		
15	•		EAT TRAN*	IANK			USED IN THE			*5 3					ЧИА*МАКСП,	, 197
H14			S ON A .*				RATION OF TH			*				H LINDAHL		
R-151,0			E SPACE +				RMAL ENVIROR			*		+NEL	*-D	MS	*	
	_		XTERNAL *				FOR THE LOS			*		*	*		*	
			A 10 DE+				AND TO MORE			*		*	*		*	
	*G	/40 DEG	DOUBLE C*			*CCUI	RATELY DEFIN	<b>VE</b> *	•	*		*	*		*	
	*01	VE-DGIVE	NOSE IN*			*THE	RECOVERY FA	*TO		*		*	*		*	
	*T	HE NASA/	ARC 3 5 *			*ORS	FOR REDUCIN	VG +		*		*	*		*	
	*H	YPERSONI	C TUNNE *			*THE	<b>HEAT TRANSI</b>	FER*		*		*	*		*	
	+L															
	τL		T.			TUATI	FROM FH13	*		<b>*</b>		*	•		*1*	

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-		•	WIND TUNNER	L TEST /	DMS DATA	PROCES	SING					255
	*	*	*	*		*MODEL		*	*	COGNIZANT	* BASI	IC
TEST	*	* CONFIGURATIONS	* TES	ST *	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLICA	
ĪD	* REPORT TITLE	* TESTED	* PURPO	D\$E *	TEST	+MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COM	MENTS
NRLAD	- *INVESTIGATION OF	F +LANDING	*DETERMINAT	TION OF *	FORCE	<b>*</b> 0405	1	*ROCKWELL/	*M	T HUGHES/RI	*DMS-DR-	-2314
	- *SUPPORT SYSTEM I		*EFFECTS OF			+0 20		*NRLAD -	*S.	R HOULIHAN	*FEB.,	1981
754	/+FECTS ON ORBITES		*S TUNNEL M			+0 20		*LOW SPEED WI		J BURST	*	
DA 176	*LOW SPEED AEORD		*NFIGURATIO			+		*TUNNEL	*-DM	IS	*	
	106*AMIC CHARACTERIS		*HE FORCE (			*		*	*		*	
AC 101, 7	*ICS USING O 040		*ENTS AND I			*		*	*		*	
	*SCALE MODEL 43-0		+S ON THE			*		+	*		*	
	+IN THE NAAL LOW	-	*CONE OF TH			*		*	*		*	
	*PEED WIND TUNNEL	-	*TER IN THE			*		*	*		*	
	* FEED WIND   DIVINE	*	+G CONFIGUR			+		*	*		*	
	*	*	*	*		*		*	*		*	
NRLAD	- *RESULTS OF AN II	WYO 010-SCALE VI 70	•			* 0.01	0 /	*ROCKWELL/	∗R C	MENNELL/RI	*DMS-DR-	-2315
TTWT		EY+OOO140C INTEGRAT				*O 6		*NRLAD -		H LINDAHL	*AUGUST	1976
297		FE*D SPACE SHUTTLE				*1 25		*7-FOOT TRIS			*	
297 [A141	*CTS ON INTEGRATI		*HINGE MOME			*		*C WIND TUNNE		· <del>-</del>	*	
	S23+VEHICLE ELEVON		*D WING BEN			*		*	*		*	
JK-147,0	+NGE MOMENTS AND		*RSIONAL MO	•		*		*	*		*	
	*ING PANEL LOADS		*	*		*		*	*		*	
	*BTAINED WITH O		*	*		*		*	*		*	
	*O-SCALE MODEL 72	=	*	*		*		+	*		*	
	*OTS IN THE ROCK!		*	*		*		*	*		*	
	*LL TRISONIC WIN		**	*		*		*	*		*	
		<i>y</i> *	•	•		*		*	*		*	
	*TUNNEL	•	<b>7</b> •			*		*	*		*	
100	*DECULTS OF TEST	I*FULL 331 INCH DI	ANTO CYAMINI	- THE EE*	FORCE	*0.07	/	*ROCKWELL/	+n F	THORNTON/RO	oc*DMS~DR-	-2316
ARC	- *RESULTS OF TEST	ITTULE SST INCH DI	ATIO EXAMINA *ACTOTITY	ne THE *	DDESCIDE	*O 55		*ARC -		LL INTERNATIO		
	- YA13/ IN THE NASA	NS*AN 80% (264 8 IN	442101644	VEDUDANA	PKESSOKE	*1 15		*14-FOOT TRAN			*	, , , ,
143-1	/*ARC 14 FUUT TRAI	L +H) OF FULL DIAME	T+AMIC DATA	CASTEM *		* , , ,				. MILLER/ ROO	CK*	_
IA137			*(AADS) FO			ale:		*L		L INTERNATION		9
JR-147, 0	322+OF THE O.O7 SCAL	D *BICONIC NOSE PRO				*		*	*L		*	-21
			+ACK AND SI			*		*		A SARVER	*	Poor
	+REBODY (MODEL 68		*DURING BOO			*		*	*G		*	Ŏ
	+T) TO DETERMINE		*UURING BUC	יים וינגנע≁		•		*	*-DM		*	Õ
	*AUXILIARY AEROD		r⊓1 +	4 1		*		*	*		*	20
	*AMIC DATA SYSTE	V1 *-	<b>₹</b>			 		···	*		*	
	<b>∀FEASIBILITY</b>	*	*	***		~		~	~			NO.

OF POOR QUALITY

TEST		*			CONFIGURATIONS	* 5 * TEST	*	*MODEL	L * SCALE* TES	* TING *	COGNIZANT TEST DMS		ASIC ICATIONS
ID	<b></b>	* REF	PORT TITE	.E *	TESTED	* PURPOSE			RANGE* AGE				DMMENTS
ARC	_	*RESUI	TS OF TE	: STS *	0.04-SCALE (83-0	)*TO DETERMINE	י מרפ ∗ו	EAT-TOANS*O OA	/ *ROCKW	E11 / #M	H DYE/RI	*DMC 1	00 0047
3.5HWT	-	*TO DE	ETERMINE	REAC*	ORBITER	*NOZZLE EFFEC		*5.2			H. LINDAHL		DR-2317 . 1980
216			CONTROL			*THE ORBITER		+5.3		OOT HYPER*-D		. ≁UAIN	, 1960
OH53A	•		RCS) NOZZ			*BODY ASCENT		*		WIND TUN*	Citi	*	
CR-151.1	787		S ON THE			*YNAMIC HEATI		•	*NEL	#110 TON*		•	
•			FOREBODY			*TES	*	*	*	*		*	
		*ENT #	AERODYNAM	IC H*	r	*	*	*	*	*		*	
		*EATIN	NG RATES	USIN*	-	*	*	*	*	*		.*	
		*G A (	04-SCAL	E MO*	:	*	*	*	*	*		*	
		*DEL (	4I (0-E8)	I THE+	•	*	*	*	*	*		*	
		*AMES	RESEARCH	CE *	•	*	*	*	*	*		*	
		*NTER	3 5 F00T	. HAb*		*	*	*	*	*		*	
		*ERSON	AIC MIND	TUNN*		*	*	*	*	*		*	
		*EL (0	)H53A)	*	:	*	*	*	*	*		*	
		*		*	ı	*	*	*	*	*		*	
LARC	-	*HIGH	SUPERSON	IIC S*	ORBITER-140A/B/C	=*DETERMINATIO	N OF *F	ORCE *2.86	- *LARC	/ *B.	SPENCER.	G W*DMS-I	DR-2318
UPWT	-	*TABIL	.ITY AND	CONT *	B26 C9 E43 F8 M1	6*CONTROL SURF	ACE E*	*4 60	*LARC		E/LARC	*VOLU	
1173	/	*ROL C	CHARACTER	RISTI+	N28 R5 V8 W	*FFECTIVENESS	AT H*	*	*UNITA	RY PLAN W*J.			1976
LA75			F A 0.015			*IGH SUPERSON	IIC MA+	*	*IND T	UNNEL *D.	B. WATSON	*	•
CR-147.6	646	*LE (F	REMOTELY	CONT *		*CH NUMBERS	*	*	*	*-[	MS 🚜	*	
		+ROLLE	D ELEVON	1) Ma⊁		+	*	*	*	*		*	
			4-O SPAC			*	*	*	*	*		*	
		*UTTLE	ORBITER	TES*		*	*	*	*	*	•	, *	
			N THE NA			*	*	*	*	*	tı	*	
			I-FOOT UP			*	*	*	*	*		*	
		*LEG 2	?) (LA75)	*		*	*	*	*	*		*	-
		*		*		*	*	+	*	*		*	
LARC	-	*HIGH	SUPERSON	IIC S*	ORBITER-140A/B/C	=*DETERMINATIO	N OF *F	ORCE *2 86	- *LARC	/ +B.	SPENCER,	G W*DMS-E	DR-2318
UPWT					B26 C9 E43 F8 M1			*4.60	*LARC	- *AR	E/LARC	*VOLU!	ME 02
1173					N28 R5 V8 W	*FFECTIVENESS		*	*UNITA	RY PLAN W*J.	W BALL	*DEC	, 1976
LA75			A 0.015			*IGH SUPERSON	IC MA*	*	*IND T	UNNEL *D.	B WATSON	*	
CR-147,6			REMOTELY			*CH NUMBERS	*	*	*	*-[	MS	*	
			D ELEVON			*	*	*	*	*		*	
			4-0 SPAC			*	*	*	*	*		*	
			ORBITER			*	*	*	*	*		*	
			N THE NA			*	*	*	*	*		*	
			I-FOOT UP			*	*	*	*	*		*	
		*LEG 2	2) (LA75)	*		*	*	*	*	*		*	
		*					.1.						

WIND TUNNEL TEST / DMS DATA PROCESSING

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				~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	WIN	D TUNNEL TES	т /	DMS DATA	PROCES	SING						257
			*		*				*MODEL		*	*	COGNIZANT	*	BASI	2
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF				*	TEST DMS	*PU	BLICA	TIONS
ID		REPORT TITLE	*		*	PURPOSE					* AGENCY	*	PERSONNEL	*OR	COMM	ENTS
	- *H	EAT TRANSFER AN	ID*	01-SCALE SPACE	S+TO	DETERMINE A	SCE*F	IEAT-TRANS	S*01	/ /	*ROCKWELL/		CARROLL/RI.			
HST				UTTLE ORB/ET 59					*7 5				WITTLIFF/CAL	L5*UU	NE,	19/9
9	•	A O O1-SCALE S		T		NG RATES AND			*20.0		*48-INCH HYPERS			- -		
HST		CE SHUTTLE MODE				SURE DISTRIB			*		*ONIC SHOCK TUN		HERSET H LINDAHL	T.		
143	•	59-OT) IN THE (				S ON AN UPDA			*		···			-T		
?-151,		LSPAN HYPERVELO				NFIGURATION			*		*96-INCH HYPERS		5	*		
		TY SHOCK TUNNEL	.5*			500) OF THE			<del>π</del>		+ONIC SHOCK TUN *NEL	± .		*		
	* (	IH43)	*			TER/EXTERNAL	IA*		ж		***************************************	<b>≁</b>		- -		
	*		*		*NK		*		<b>3</b> K	;	<b>本</b> 山	* *		*		
	*		*		*	ODTATAL THE	*	oner.	4 0 04	DE /	*ROCKWELL/	 	. DAILEDA. J	*D#	S-DR-	2320
DC				RBITER O 0125 7				URGE		-			ROQUIN/RI		LUME (	
TB	_	SING A 0.0125-5		OT .		ON EFFECTS O			*5 9		*AEDC ~ +HYPERSONIC WIN				B.,	-
A		LE MODEL(70-OT)				RCS THRUSTE			*5.9		*HYPERSONIC WIR			***	ъ.,	19/6
169		THE SPACE SHUT				PLUMES ON S			ж .ь.					4		
-151,		E VEHICLE ORBIT				RODYNAMICS D			<b>*</b>		<b>ች</b>	4 ~ Ω(V(. 4	S & wa	Ψ.		
		IN THE AEDC VE				RETURN-TO-L			*		<b>T</b>	÷		*		
	*1	UNNEL B (OA169)	+			-SITE(RTLS)			*		4 	т т	•	4		
	*		*		*RT	FLIGHT PHAS	E *		*		ች 	* *		•		
	*		* _		*	DOTATAL INTE	*	CODOR	* ^ ^	n= / ·	* *ROCKWELL/	र *.!.!	DAILEDA, J.	*DM	S-00-	2320
DC				RBITER O 0125 7				URGE	* 0.00				ROQUIN/RI		LUME	
TB		SING A 0 0125-5		UI		ON EFFECTS O			*5 9		*HYPERSONIC WIN				В,	
A		LE MODEL (70-OT)				RCS THRUSTE			*D 9		*D TUNNEL (B)			*16	υ,	1370
169		THE SPACE SHUT				PLUMES ON S			т _		TO TOWNER (B)	*-DM		*		
-151,		E VEHICLE ORBIT				RODYNAMICS D			7 		≁ u	# - DIN	3	<b>4</b>		
		IN THE AEDC VE				RETURN-TO-L			<u>*</u>		1 1	* *		*		
	*T	UNNEL B (DA169)	*			-SITE(RTLS)			*		م ب	- -		*		
	*		*		*	FLIGHT PHAS	E '		-T		, •	*		*		
D.O.	*	FOUNTS OF TEST	*	DDITED A 0405 7		ODTATAL TAITE		ODCE	* ^ ^	25 /	*ROCKWELL/	* 1 1	. DAILEDA, J	*DM	S-DR-	2320
DC				RBITER 0.0125 7		OBTAIN INTE ON EFFECTS O		UKCE	*5 9				ROQUIN/RI		LUME	
TB		SING A 0.0125-5		U i		RCS THRUSTE			*5.9		*HYPERSONIC WIN				B	-
A		LE MODEL(70-OT)			*CT	PLUMES ON S	C1/ *		* 3.5				E VAUGHN	*	,	
169		THE SPACE SHUT			* C	RODYNAMICS D	3V *		···		* TOTALITY (D)	*-DM		*		
- 151		E VEHICLE ORBIT				RETURN-TO-L	_		*		*	*	<b>.</b>	*		
,	* 17	IN THE AEDC V	\ F *						**			-		:		
,		UNNEL D. (OAIGG)			4011	_ctTC(DT(c)	V D U +		*		*	*		*		
,		UNNEL B (OA169)	*			-SITE(RTLS) FLIGHT PHAS			*	:	*	*		*		

			WIND T	UNNEL TEST	/ D	MS DATA	PROCES	SSING						25
	*	. <b></b>	*		*		*MODE!	 L	*	*	C	OGNIZANT		* BASIC
TEST	*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TE	ST DMS		*PUBLICATION
ID	* REPORT TITLE *	TESTED	* !	PURPOSE	*	TEST	+MACH	RANGE	* AGENCY	*	P	ERSONNEL		*OR COMMENTS
AEDC -	*RESULTS OF TEST OF	ORBITER VEHICLE F	F*TO DE	TERMINE THE	*HE	AT-TRANS	*0 040	0 /	*ROCKWELL/	*:	J. C	MARTINEZ	+	*DMS-DR-232
	*H69 OBTAINED IN T			ENCE OF THE			*8 O		+AEDC -	*1	V. H	DYE/RI		*VOLUME 01
V418-E9A	/ *HE AEDC VKF HYPER			ROTECTION T			<b>*8 0</b>		*HYPERSONIC	WIN*	JE	VAUGHN		*AUGUST, 197
OH69	*SONIC TUNNEL B US			UGHNESS ON			*		*D TUNNEL (E					*
CR-151,41	O*ING THE INFRARED	k	*INDWA	RD SURFACE	B*		*		*	*				*
	*SCANNING METHOD T>			RY-LAYER TE			*		*	*				*
	*O OBTAIN HEAT TRA	k	*NSITI	ON.	*		*		*	*				*
	*NSFER DATA ON THE	ĸ	*		*		*		*	*				*
	*O O4O SCALE MODE	k	*		*		*		*	*				*
	*L 82-0 OF THE SPA		*		+		*		*	*				*
	*CE SHUTTLE FOREBO	r	*		*		*		*	*				*
	*DY	•	*		*		*		*	*				*
	*	k	*		*		*		*	*				*
AEDC -	*RESULTS OF TEST O	ORBITER VEHICLE F	F*TO DE	TERMINE THE	*HE	AT~TRANS	*0.040	0 /	*ROCKWELL/	*(	J C.	MARTINEZ	+	*DMS-DR-232
HWTB -	*H69 OBTAINED IN T	OREBODY	*INFLU	ENCE OF THE	R*		*8 0	-	*AEDC -	*\	∦. H.	DYE/RI		*VOLUME 02
V41B-E9A	/*HE AEDC VKF HYPER	k	*MAL P	ROTECTION 1	[]*		*8.0		*HYPERSONIC	WIN*	J E.	VAUGHN		*AUGUST, 19'
OH69	*SONIC TUNNEL B US	r	*LE RO	UGHNESS ON	W*		*		*D TUNNEL (	3) *	-DMS			*
CR-151,41	1*ING THE INFRARED >	k	* INDWA	RD SURFACE	B+		*		*	. +				*
	*SCANNING METHOD T>	,	*OUNDA	RY-LAYER TE	*A\$		*		*	*		•		*
	*O OBTAIN HEAT TRA	l .	*NSITI	ON	*		*		*	*				*
	*NSFER DATA ON THE*	•	*		*		*		*	*		•		*
	*O O4O SCALE MODE *	<b>k</b>	*		*		*		*	*				*
	*L 82-D OF THE SPA	۲	*		*		+		*	*	٠,٠			*
	*CE SHUTTLE FOREBO	k	*		*		*		*	*	3			*
	*DY ,	k	*		*		*		+	*	3			*
	*	, ,	*		*		*		*	*				*
NRLAD -	*RESULTS OF TEST O	SPACE SHUTTLE ORE	B*TO RE	SOLVE DIFFE	R*FO	RCE	* 18 (	0-	*ROCKWELL/	×۱	R C.	MENNELL,	Α	*DMS-DR-2322
LSWT -	*A228 USING THE SS	ITER VEHICLE 102	*ENCES	IN AIR DAT	Γ <b>Α</b> *		* 25	1	*NRLAD -	,*I	L ME	NA, R. B.	R	*NOV., 198
757	/*V VEHICLE 102 0.1	e	*PROBE	AND FLIGHT	Γ *		*		*LOW SPEED \	√IND*l	<b>JSSEL</b>	L / RI		*
OA228	*O SCALE FOREBODY	k	*TEST	PROBE PRESS	5 *		*		*TUNNEL	*1	₩ B.	MEINDERS		*
CR-160,84	7*MODEL NO. 57-0 IN•	k	*URE D	ATA OBTAINE	₹D*		*		*	*	-DMS			*
	*THE NAAL LOW SPE >		*DURIN	G WIND TUNN	<b>1</b> *		*		*	*				*
	*ED WIND TUNNEL >	k	*EL TE	STS DA174 A	\N*		*		*	*				*
	* ,	k	*D OA2	24	*		*		*	*				*

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	WIND TUNNEL TE	ST / DMS DATA	PROCESSING	3		259
* *	*	+	*MODEL	*	* COGNIZANT	* BASIC
TEST * * CONFIGURATIONS		* TYPE OF		E* TESTING	* TEST DMS * PERSONNEL	*PUBLICATIONS
ID * REPORT TITLE * TESTED	+ PURPOSE	* TEST	*MACH RANG	SE* AGENCY	* PERSONNEL	*OR COMMENTS
1 1 D	T.4500 10100 110	/FOT - FOROF		/ .bookuri   /	M F NTOUGLES D	tubus on soos
LARC - *RESULTS OF INVEST*O 010-SCALE 72-0 UPWT - *IGATIONS CONDUCTE*S MODEL	*IGATIONS ON TH		*0 010 / *1 55 -	/ *ROCKWELL/ *LARC -	*M E. NICHOLDS,P  * HAWTHRONE,J.T	
1152 /*D IN THE LARC 4-F*	*PDATED CONFIG		*2.00		W*HAMILTON,P K M	
IA94A *OOT UNITARY PLAN *	*ION-5 SPACE SI		*	*IND TUNNEL	*LER/RI	*
CR-151,039*WIND TUNNEL LEG *	*LE.FULL SIMULA		+	*	+D C FREEMAN/LA	RC*
*NO 1 USING THE O*	*N OF UPDATED \	/EHI*	*	*	*R H. LINDAHL	*
* 010-SCALE 72-OTS*	*CLE PROTUBERAN	ICES*	+	*	*-DMS	*
*MODEL OF THE SPA *	*AND ATTACH HAR	RDW *	+	*	*	*
*CE SHUTTLE INTEGR*	*ARE WAS USED.	*	*	*	*	*
*ATED VEHICLE *	*	*	*	*	*	*
* *	* 	*	*	*	*	*
LARC - *RESULTS OF INVEST+0.010-SCALE 72-0				/ *ROCKWELL/ *LARC -	*M E. NICHOLS,P	
UPWT - *IGATIONS CONDUCTE*S MODEL 1177 /*D IN THE LARC 4-F*	*IGATIONS ON THE *PDATED CONFIGURE		*2 50 - *4.50		*HAWTHORNE,J T W*AMILTON.P K MI	· · · · · · · · · · · · · · · · · · ·
IA94B *OOT UNITARY PLAN *	*ION-5 SPACE SH		*4.50	*IND TUNNEL	*ER/RI	<b></b>
CR-151,040*WIND TUNNEL LEG *	*LE LAUNCH VEH		*	*	*D C FREEMAN/LA	RC*
*NO 2 USING THE O*	*: FULL SIMULAT		*	*	*R. H. LINDAHL	*
* 010-SCALE 72-DTS*	+OF UPDATED VEH		*	*	*-DMS	*
*MODEL OF THE SPA *	*LE PROTUBERANO	ES *	*	*	*	*
*CE SHUTTLE INTEGR*	*AND ATTACH HAR	RDWA*	*	*	+	*
*ATED VEHICLE *	*RE WAS USED	*	*	*	*	*
* *	*	*	*	. +	*	*
MSFC - *AERODYNAMIC CHARA*CONF 139	*TO DETERMINE T		+0 00563 /		•	FC*DMS-DR-2325
14TWT - *CTERISTICS OF A O*	*ENTRY STATIC		+0 6 -	*MSFC -	*V W SPARKS	*NOV , 1976
620 /* 00563 SCALE 142-*	*ILITY OF THE S	SRB *	+3 48	*14-INCH TRIS		*
SA14FA *INCH DIAMETER SOL*	*	*	*	*IC WIND TUNN	EL*~DM2	*
CR-147,645*ID ROCKET BOOSTER* +{MSFC MODEL 449 *	-π -₩	* *	*	*	*	*
*AND 480) WITH SID*	*	*	*	*	*	* 00
*E MOUNTED STINGS *	*	*	+	*	*	ORIGINAL OF POOR
*IN THE NASA/MSFC *	*	*	*	*	*	* 77 🛱
*14 INCH TRISONIC *	*	+	*	*	*	* ŏ\$
*WIND TUNNEL *	*	*	*	*	*	* 95
+ *	*	*	*	*	*	* 70 !-
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				. ~	WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING				2
	*		*		*	· · · · · · · · · · · · · · · · · · ·	*		*MODE!	 L	*	*	COGNIZANT	* BASIC
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALI	E* TESTING	*		*PUBLICATIO
IĐ	*	REPORT TI	TLE *	TESTED	*	PURPOSE	*	TEST	*MACH	RANG	E* AGENCY	*		*OR COMMENT
					•									
ARC STPT	- *: - *:	RESULTS OF 1 ICATIONS CON	INVEST+0	010-SCALE 72-01				ORCE	+0 010	•	*ROCKWELL/			*DMS-DR-232
49		D IN THE LAF				TION ON THE U			*0 6		*LARC -	*H/	AWTHORNE,J.T.	HA*VOLUME 01
A93		OOT TRANSON				ED CONFIGURAT 5 SPACE SHUTT			*1.205	5	*8-FOOT TRAN	SON*M	LTON, P.K MIL	
		SSURE TUNNEL				FULL SIMULATI			*		*IC PRESSURE			*
		THE 0.010				F UPDATED VEH			* *		*NNEL		C FREEMAN/LA	\RC*
		72-OTS MODEL				PROTUBERANCE			*		*	*R *~[	H LINDAHL	*
	*	THE SPACE SH	WTTLE*			ATTACH HARDW			*		*	*~[	DM2	*
	*	INTEGRATED \	/EHIC *			WERE USED	*	•	*		*	·		*
	*	_E	*		*		*		*		*	*		* *
	*		*		*		*		*		*	*		*
ARC	- *	RESULTS OF 1	NVEST*0	010-SCALE 72-01	*AER	D-LOADS INVES	T*F	DRCE	*0 010	) /	*ROCKWELL/	*M	F NICHOLS P	. *DMS-DR-232
TPT	- *	CATIONS CON	≀DUCTE*S	MODEL	*IGA	TION ON THE U	P*		*0 6		*LARC -		AWTHORNE, J T	
49		IN THE LAR				ED CONFIGURAT			*1.205	5	*8-FOOT TRAN		LTON P.K MIL	
A93	)*	OT TRANSONI	C PRE*			5 SPACE SHUTT			*		*IC PRESSURE	TU*R/	'RI	*
K-151,		SURE TUNNEL				FULL SIMULATI			*		*NNEL	*D	C FREEMAN/LA	RC*
		THE 0 010-				UPDATED VEH			*		*		H. LINDAHL	*
		72-OTS MODEL				PROTUBERANCE			*		*	*-[	DMS	*
		THE SPACE SH				ATTACH HARDW	*		*		*	*		*
		INTEGRATED V Le	EHIG *		*ARE	WERE USED	*		*		*	*		*
	7 L	- 5	*		*		*		*		*	*		*
EDC	- +5	FSIIITS OF T	ECTC +C	ONFIG 102 ORBIT	* ******		*		*		*	*		*
WTB	- *1	STNG 0 0125	-5013 *C	R AND ET, DESIGN	) UI* 40174	I EEEECTC OF	C*FU	JRCE	<b>*</b> 5 9	-	*ROCKWELL/			RO*DMS-DR-232
9A	/*F	MODE! (70-	UL) U*V	TED MODEL 70-OT	ተውሮ ገ	CEPTECIS OF	K*		*		*AEDC -		J DAILERA,	J *VOLUME 01
A22	, - *F	THE SPACE	SHUTT*			S ON SSV AER			*		*HYPERSUNIC	WIN*MA	ARROQUIN, H S	·
R-151,		E VEHICLE O			* LOME	3 UN 33V AEK	U *		*		*D TUNNEL (B			*
•		IN THE AED			*		*		<u>.</u>		*		E. VAUGHN M MOSER JR	*
	+1	UNNEL B	*		*		*		*		•	*M.		*
	*		*		*		*		*		*	γ- <u></u> ε	)MS	*
EDC	- *F	ESULTS OF T	ESTS *C	ONFIG. 102 ORBIT	*TO 0	BTAIN INTERA	C+FC	DRCE	<b>*5</b> 9	_	*ROCKWELL/	*1	1 TOTMMED/A	RO*DMS-DR-232
<b>∦T</b> B	- *[	SING O 0125	-SCAL+E	R AND ET, DESIGN	*TION	I EFFECTS OF	R*		*		*AEDC -		J. DAILERA,	
94	/*E	MODEL (70-	OT) O*A⁻	TED MODEL 70-OT	*CS 7	HRUSTER JET	p*		*			WIN*MA	RROQUIN. H S	*AUGUST, 19
122	* F	THE SPACE	SHUTT*			S ON SSV AER			*		*D TUNNEL (B	) *DR	RESSER/RI	*
₹~151,		E VEHICLE O			*		*		*		*	•	E VAUGHN	*
		IN THE AED	C VKF*		*		*		*		*		M. MOSER JR.	*
	*T	UNNEL B	*		*		*		*		*	*-D		*
	*		*		*		*		*		*		=	•

			WIND TUNNEL TEST	/ DMS DATA	PROCESSING			26
							* COGNIZANT	* BASIC
	*	*	*	Y	*MODEL	*		*PUBLICATIONS
	*	* CONFIGURATIONS		* TYPE OF		* TESTING	* TEST DMS	
ID	* REPORT TITLE	⋆ TESTED	* PURPOSE	* TEST	*MACH RANG	E* AGENCY	* PERSONNEL	*OR COMMENTS
						*POOKUELL/	*L L. TRIMMER/AR	0+0Mc=00-0227
		S *CONFIG. 102 ORBI			+5 9 -	+ROCKWELL/		
		CAL*ER AND ET, DESIG			*	*AEDC -	*J. J DAILERA, J	
		O+ATED MODEL 70-OT			*		N+MARROQUIN, H S	*AUGUS1, 1971
	*F THE SPACE SHU		*LUMES ON SSV AE	₹0*	*	*D TUNNEL (B)		*
R-151,081	I+LE VEHICLE ORBI	!TE*	*	*	*	*	*J. E VAUGHN	*
	*R IN THE AEDC V	/KF*	*	*	*	*	⊁M M MOSER JR.	*
	*TUNNEL B	*	*	*	*	*	*-DMS	*
	*	*	*	*	*	*	*	*
ARC -	*FFFFCT OF A SUR	RFA+REUSABLE SURFACE	*TO DETERMINE EF!	FE*HEAT-TRANS	S+1 0 /	*LARC /	*D. A THROCKMORT	0*DM\$-DR-2328
FHT -	*CF-TO-GAP TEMPE	RA*INSULATION TILE	G*CT DF A SURFACE	-T*	*10 3 -	*LARC -	*N/LARC	*AUGUST, 1976
	*TURE DISCONTINU		*O-WALL TEMPERATI		*	*CONTINUOUS-FL	O*J W. BALL	*
,	*Y ON THE HEAT T		*E DISCONTINUITY		*	*W HYPERSONIC	T*M M MOSER JR.	*
	*NSFER TO REUSAE		*N THE HEAT TRANS		*	*UNNEL	*-DMS	*
			*ER WITHIN SPACE		•	*	*	*
	*SURFACE INSULAT	1 *	*HUTTLE, RSI, TI				*	*
	*ON TILE GAPS	*			* *	•	*	*
	*	*	*GAPS SUBMERGED					
	*	*	*N A THICK TURBU		*	· *	- <b>Т</b>	4
	*	*	*NT BOUNDARY LAY	ER*	*	*	<i>त</i>	ж.
	*	*	*	*	*	*	*	*DMC DD 0000
		SUL*SSV ORBITER (MOD			*0.4 -	+ROCKWELL/	*V ESPARZA,	*DMS-DR-2329
1677 -	*TS OF THE BASEL	.IN+L 57-0) FOREBODY	*ATION OF THE AIS	₹ *	*1 30	*LARC -		*AUGUST, 198
312 /	/*E AIR DATA PROB	BES*W/ ADP, FTP, AND	*DATA PROBES	*	*	*16-FOOT TRANS		. *
DA224	*AT THE LANGLEY	1 *ADP AND FTP	*	*	*	+NIC TUNNEL	*H AUGUST/ROCKWE	L*
R-160.837	*6-FOOT TRANSONI	(C *	*	*	*	*	*L	*
	*WIND TUNNEL USI		*	*	*	*	*S. R. HOULIHAN	*
	*A O 10 SCALE OF		*	*	*	*	∗J. E VAUGHN	*
	*ITER FOREBODY N		*	*	*	*	*-DMS	*
	*EL 102 LINES (C		*	*	*	*	*	*
	*24)	JAZ#	*	*	*	*	*	*
	*24)	т "	•	*	*	*	*	*
		OUT A HODEL O	OTTO CIMULATE ATM		*** 0.175 /	*BUCKMELT \	*B J HERRERA/RI	*DMS-DR-2330
		.OW*CONF 4, MODEL 2			*7 82 ~	*AEDC -	*L D. CARTER, W	
—	*FIELD SURVEY CO		*PHERIC ENTRY BY		71 02 "		N*R MARTINDALE. C	
•	*DUCTED USING TH		*NVESTIGATING SH		<i>क</i>		YE KAUL/ARO	
	*0 0175 SCALE OF		*K AND BOUNDARY		*	*D TUNNEL (B)		T.
	7+TER MODEL 29-0		*YERS ON LOWER OF		*	*	*M. M MOSER JR	*
	*THE AEDC VKF TU		*ITER SURFACE	*	*	*	*-DMS	*
	*NEL B DURING TE	ST*	*	*	*	*	*	*
	*0H52	*	*	*	*	*	*	*
	*				_		.a.	ut.

			MIND LONNER I	EST / DMS DATA	PROCESSING			262
TEST ID	* * * * REPORT TITLE	* + CONFIGURATI * TESTED	* ONS * TEST * PURPOSE	* * TYPE OF * TEST	+MODEL + SCALE +MACH RANGE	, 2012/10	* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
1,97,87- 74-1 1TWT - A11F R-160,83  RC - 1,97,87- 74-1 1TWT - A11F	+STATIC STABILITY  *AND PRESSURE DAT,  /*FROM WIND TUNNEL  *TESTS OF A 028- *SCALE (MSFC MODE  8*483) SPAGE SHUTT  *LE SRB AT REENTR  *ATTITUDES IN THE  *NASA/ARC UNITARY  *PLAN WIND TUNNEL  *(SA11F)  *  *STATIC STABILITY  *AND PRESSURE DAT,  /*FROM WIND TUNNEL  *TESTS OF A 028- *SCALE (MSFC MODE  19*483) SPACE SHUTT  *LE SRB AT REENTR  *ATTITUDES IN THE	A*ELD(SOLID)  *SRB-W/O HEAT  *LO L*SRB-WITH HEAT  *ILD (FLEXIBLE  *  *  **  **  *SRB-WITH HEAT  A*ELD(SOLID)  *SRB-W/O HEAT  *LD L*SRB-WITH HEAT  *ILD (FLEXIBLE	*AERODYNAMIC SHIE*LITY CHARACT *ICS AND PRES SHE*DISTRIBUTION  *FIGURATION  *  *  *  SHI*TO DETERMINE *AERODYNAMIC SHIE*LITY CHARACT *ICS AND PRES SHE*DISTRIBUTION	STABI+PRESSURE ERIST* SURE * OF T*. Y CON*  * * * THE *FORCE STABI*PRESSURE ERIST* SURE * OF T*	*1.96 - +3 48 * + * * * * * * * * *0.028 / *1.96 - *3.48 * *	*ARC - *11-F00T, 9-F00 *T, 8-F00T, UNI *TARY WIND TUNN *EL *11-F00T TRANSO *NIC WIND TUNNE *L (UNITARY) * * * * *MSFC / *ARC - *ARC - *11-F00T, 9-F00 *T, 8-F00T, UNI *TARY WIND TUNN	*U D.JOHNSON/NASA  *MFSC  *U E. VAUGHN  *G W KLUG  *-DMS  *  *  *  *  *  *  *  *  *  *  *  *  *	*VOLUME 01 *OCT , 1981 -* * * * * * * * * * * * * *
4-TWT - 21 A13	*NASA/ARC UNITARY *PLAN WIND TUNNEL: *(SA11F)  *RESULTS OF AEROD: *NAMIC FORCE AND O *OMENT TESTS OF O *03-SCALE MODELS '3*AX13191-3 AND 45 *O) OF THE SPACE *HUTTLE ORBITER AI *D CARRIER IN THE	*  *  *  **  **  **  **  **  **  **  *	ON *NCH AND FREE  *DATA BASE FO CONE*NNED SEPARAT NG *ESTS OF THE  *ER ALT CONFI *ION.	AIR * R PLA* ION T* CARRI*	* * * *0.03 / *0.3 *0.6	*L (UNITARY)  *  *  * * *ROCKWELL/ *ARC -	*  *  *  *R.L GILLINS/ROCK  *ELL  D*V.ESPARZA/ROCKWE	*OCT , 1977 L* * *
	*NASA/ARC 14-FOOT *TRANSONIC WIND TO *NNEL (CA13) *	*EED BRAKE DEP		* * * *	* * *	* * * *	* * *	ORIGINAL PAGE II OF POOR QUALIT

		WIND TUNNEL TEST	/ DMS DATA	PROCESSING			263
* TEST * ID * REPORT TITLE	* + CONFIGURATIONS + TESTED	* * TEST * PURPOSE	* * TYPE OF * TEST	+MODEL * SCALE *MACH RANGE		* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
RC - *WIND TUNNEL TEST 1TWT - *0A175 OF THE 0.03 87-1 /*O-SCALE SSV ORBIT A175 *ER MODEL (47-0) R-151,374*IN THE 11 X 11-FC *OT LEG OF THE NAS +A/ARC UNITARY PLA *N WIND TUNNEL (0A *175) *  *  *  *  *  *  *  *  *  *  *  *  *	*IGURATION WITH TA **ILCONE *O1+TC23+G19 'ALT' D*WITH LANDING GEA 5*R DEPLOYED **O1 'ALT' WITHOUT	*E STABILITY AND *ONTROL CHARACTER *STICS WITH TAIL- *CONE ON. DETERMI *E ELEVON, RUDDER *SPEEDBRAKE, AND *ODY FLAP HINGE *MOMENTS WITH SEA	C+PRESSURE I*  * N* /* B*  * L* F* F* ID+ II * II	*0 030 / *0 4 - *1.2 * * * * * * * * * * * * * *	*ROCKWELL/ *ARC - *11-FOOT TRANSO *NIC WIND TUNNO *L (UNITARY) * * * * * * * * * * * * * * * * * * *		*DMS-DR-2333 *VOLUME O1 *NOV , 1977 * * * * * * * * * * * * * * * * * *
R-151,375*IN THE 11 X 11-F6 +OT LEG OF THE NAS	3*IGURATION WITH TA T*ILCONE +01+TC23+G19 'ALT' D*WITH LANDING GEA S*R DEPLOYED N+U1 'ALT' WITHOUT	* **VERIFY ALT VEHIC **E STABILITY AND *ONTROL CHARACTER **STICS WITH TAIL- **CONE ON. DETERMI **E ELEVON, RUDDER **SPEEDBRAKE, AND **ODY FLAP HINGE **MOMENTS WITH SEA	C*PRESSURE I * , * N*   *   *   *   *   L *   F *   i *   H *   N *	* * 0 030	* *ROCKWELL/ *ARC - *11-FOOT TRANSO *NIC WIND TUNNO *L (UNITARY) * * * * * * * * * * * * * * * * * * *		* * * * * * * * * * * * * * * * * * *

***************************************	WIND TUNNE	L TEST / DMS DA	TA PROCESSING		264
- · · · · · · · · · · · · · · · · · · ·	* JRATIONS * TE STED * PURP				*PUBLICATIONS
ARC - *WIND TUNNEL TEST *01+TC23'/ 11TWT - *0A175 OF THE O 03*IGURATION 187-1 /*O-SCALE SSV ORBIT*ILCONE 0A175 *ER MODEL (47-0) *01+TC23+C CR-151,376*IN THE 11 X 11-F0*WITH LANG *OT LEG OF THE NAS*R DEPLOYS *A/ARC UNITARY PLA*D1 'ALT' *N WIND TUNNEL (0A*TAILCONE *175) *01 = AT13 * *'102' REG * *FIGURATION * *  AEDC - *AN INVESTIGATION *REENTRY COMMANDIANT **  *  *  AEDC - *AN INVESTIGATION **  *  *  *  AEDC - *AN INVESTIGATION **  *  *  *  *  *  *  *  *  AEDC - *AN INVESTIGATION **  *  *  *  *  *  *  *  *  *  *  *  *	WITH TA*E STABILI *ONTROL CH G19 'ALT'*STICS WITH DING GEA *CONE ON   ED *E ELEVON, WITHOUT *SPEEDBRAK *ODY FLAP   B2 - PR1 *MOMENTS W ENTRY CON*ED HINGEL ON *FECTS OF   *DEPLOYED   *GEAR/DOOR: *ICLE STAB *D CONTROL *NE PRESSUI ** CONFIG W*TO DETERM. MAJOR PRO*Y STATIC STAB	TY AND C+PRESSUR ARACTERI* H TAIL- * DETERMIN* RUDDER/* E, AND B* HINGE * ITH SEAL* INES. EF* RN/L AND* LANDING * S ON VEH* ILITY AN* TAILCO* RES *	*1 2 *11-F  * *NIC  * *L (U  * *  * *  * *  * *  * *  * *  * *	- *R R.BURROWS/R FOOT TRANSO*M. M. MANN WIND TUNNE*-DMS INITARY) *  *  *  *  *  *  *  *  *  *  *  *  *	

						WIND	TUNNEL TE	EST /	DMS DATA	PROCES	SSING						2
				*		*		 *		*MODE1	<del>-</del> L	*	*		COGNIZANT	*	BASIC
TEST		*		*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING			EST DMS		BLICATIO
ID		*	REPORT TITLE	+	TESTED	*	PURPOSE	* 	TEST	*MACH	RANGE	* AGENCY	*	·	PERSONNEL	*UR	COMMENT
															44 1 541 / 2001		
MSFC			ESULTS OF EXPER				PURPOSE (		ORCE	*0.00		*ROCKWELL/		E C. LL	ALLEN/ROCK		S-UR-233 C 19
14TWT			ENTAL INVESTIGA		MODEL 74-OTS		TEST WAS T			*0 60 *3 48		*MSFC - *14-INCH T			VARCHN	*	., 15
641		•	ONS IN THE MSFC				N INFORMAT			*3 48		*IC WIND T				*	
646		•	WT TO DETERMINE				STING/BODY			*				-DMS		*	
			FFECTS OF A MUL				ERENCE, VE			<b>.</b>		* ,	*	UNIS		*	
CR~151,	78		PLE STING SUPPO				NG ASSEMBL			T.		~ •	*			*	
			SYSTEM ON THE				GN, DETERN ECT OF VER			T.		·· ·•				*	
			TED VEHICLE AER				EPARATION			*		*	*			*	
			IYNAMICS UTILIZI 3 A 0.004 SCALE				CHARACTE			•		*	*			*	
			4-0TS, 77-0) SH				OF ET PLUS			·		*	*			*	
			TLE VEHICLE 5 (				DRBITER A			*		*	*			*	
			140 A/B)	*			ECTS OF ST			*		*	*			*	
		*	(140 A/D)	*			ELEVON HIN			*		*	*			*	
		*		*		*OME		*		*		*	*			*	
		*		*		*		+		*		*	*			*	
LARC	_	+1	NVESTIGATION OF	*1	ARC 0098-SCALE		OBTAIN ORE	BITER*F	ORCE	* 1.5	5-	*LARC /	*(	3. W	ARE/LARC	*DMS	-DR-233
UPWT			HE HIGH ANGLE O				D CHARACTI			* 4 !	5	*LARC -	+{	3 51	PENCER, JR/L	AR*MA\	/, 19
1345			TTACK AERODYNAM		AST ALGINITION		S AT ANGLE			*		*UNITARY P	LAN W*	0		*	
1390		•	CS OF A SPACE S				ACK FROM			*		*IND TUNNE	L *0	J E.	. VAUGHN	*	
LA 145			TTLE ORBITER(LA				O DEGREES	*		*		*	* E	3 J	BURST	*	
	37		.0098 SCALE MO			*		*		*		*	*•	-DMS		*	
•,			L) IN THE LARC			*		*		*		*	*			*	
			WT AT MACH NUMB			*		*		*		*	*			*	
			S FROM 1 5 TO 4			*		*		*		*	*			*	
			(LA145)	+		*		*		*		*	*			*	
		*	•	*		*		*		*		*	*			*	
NRLAD	-	*/	VERIFICATION S	T * F	LIGHT TEST PROB	E*TO	VERIFY TH	E CAL*P	RESSURE	+0 18	-	*ROCKWELL/			LEFEVRE/R		
LSWT			IDY OF THREE AME			*IBR	ATION DATA	A 08T*		<b>*O 26</b> :		*NRLAD -			HERSEY	*DEC	; 19
759		/+F	RESEARCH CENTER	*		*AIN	ED USING 1	THE A*		*		*LOW SPEED				*	
OA236		*	ITOT-STATIC PRO	B*			RESEARCH	CENT*		*		*TUNNEL	**	-DMS		*	_
CR-151,	78	6*E	S IN THE ROCKWE	L*		*ER	PROBES	*		*		*	*			*	₽0
		*L	. INTERNATIONAL	И*		*		*		*		*	*			*	" 20
		* [	AL LOW SPEED WI	N*		*		*		*		*	*			*	رخ م
		*[	TUNNEL	*		*		*		*		*	*			- AT	_
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					WIND	TUNNEL TEST	_/_	DMS DATA	PROCES	SING							266
	*		*		*		*	<del></del>	*MODEL		*		*	COGNIZANT	*	BASI	 C
TEST	*		*	COM TOWN TOWN	*	TEST	*	TYPE OF	*	SCALE	+ TESTI	NG	*	TEST DMS		_	TIONS
ID	* 	REPORT T	ITLE *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENC	Y 	*	PERSONNEL	*0R	COMM	ENTS
W	- ¥	DECINTE NE	THE LOW	Vicano a popular													
SWT	- *	W SPEED AE	POFLAST*	XX1322D-3,ORBITER		SSES PUIENI	TA*:	STRUCT-DYN						L GILLENS/RI	-		
170		IC BUFFET				FFET PROBLE			*		*UW			A SARVER	*NO\	/.,	1976
\$3		TH A O 046				LTING FROM			*			ED WIND		M. MOSER JR	*		
		MODEL (747				ER WAKE CHA			*		*TUNNEL		*-DM	S	*		
,, 1-,,,		D-3/ORBITE				ISTICS WITH			*		*		*		*		
		OF THE 747				ONE OFF, TO De design l			*		*		*		*		
		BITER IN T				ND ACCELERA			*		*		*		*		
		ERSITY OF				NVIRONMENTS			*		*		*		*		
		FON WIND T				EVELOP BUFF			•		*		*		*		
	*	, , , , , , , , ,	*			ITIVITY DAT			*		*		*		*		
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	+		*		* 10 V	AKIDUS AEKU	¥ ט *		*		*		*		*		
EDC	- *1	RESULTS OF	TESTS *C	0.0175-SCALE THIN	^ +4}св	AMBITCE LIEAT		JEAT-TDANG	*	- /	*		*		*		
WTB	- *	N A O 017	5-SCALE*-	SKIN THERMOCOUPL	40 DM	MINATOE HEWI	114.41	TEAT - TRANS			*ROCKWELI	•		BERTHOLD, J			
7A	/*i	MODEL (60-1	0) OF *E	SHUTTLE ORBITER	THE P	OPPER WING	_ > *		*7 90		*AEDC			ROQUIN/RI		UME (	
H98	*	THE SPACE	SHUTTI F*6			AT BAND PRO			*8.00		*HYPERSO				*SEF	т.,	1980
	501*0	PRBITER TO	DETED *						*		*D TUNNE				*		
		MINE RE-EN				NCES AND LH			*		*		*-DM	S	*		
		CONVECTI				ING LINES O NOZZLE HEA			*		*		*		*		
		RANSFER R							*		*		*		*		
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		OZZLES IN				D EFEAON DE			*		*		*		*		OF POOR
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						TUNNEL TEST									
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TEST		* * REPORT TIT	* LE *	CONFIGURA' TESTE		TEST PURPOSE	*	TYPE OF TEST		SCALE RANGE		*	PERSONNEL		COMMEN
10		* REPORT III			<del>-</del>										
EDC	-	*RESULTS OF T	ESTS *	O 0175-SCAL	E THIN*1)S	PANWISE HEAT	IN+H	IEAT~TRANS	*0 01	75 /	*ROCKWELL/		L. BERTHOLD,		
WTB		*ON A 0 0175-							*7 90		*AEDC -		RROQUIN/RI		.UME 02
7A		*MODEL (60-0)							*8 00		*HYPERSONIC WI			*551	1., 1:
H98		*THE SPACE SH				HAT BAND PRO	-		*	,	*D TUNNEL (B)			*	
R-160,		*ORBITER TO D				ANCES AND LH			*		<b>*</b>	* -DI	MS	*	
		*MINE RE-ENTR	Y MOD+	•		LING LINES OF			*	,	*	*		*	
		*E CONVECTIVE	HEAT*	•		IE NOZZTE HEV.			*	,	*	*		*	
		*TRANSFER RAT				AND 3)UPDAT			*		*	*		*	
		*N THE UPPER '	WING *	•		AN NOZZLE HE			*		*	*		*	
		*SURFACE AND				WITH BODY F			*	•	*	*		*	
		+NOZZLES IN T	HE AE*	*	+P A	ND ELEVON DE	FL+		*		*	*		*	
		*DC VKF 'B' H	YPERS*	•	*ECT	IONS	*		*		*	*		*	
		*ONIC WIND TU	NNEL *	•	*		*		*		*	*		*	
		*(0H98)	*	r	*		*		*		*	*		*	
	;	*	*	*	*		*		*		*	*		*	
BCA	- :	*RESULTS OF T	ESTS *	747CAM/ORBI	TER *TO	OBTAIN DYNAM	MI*S	TRUCT-DYN	1+0 03	/ :	*BOEING /	* C	A LUNDER, W	*DMS	-DR-23
TWT		*CS4 AND CS5				DADS, PRESSUI	RE*		*0 15		*TBCA -		BURGGRAF, W		i , 11
		*VESTIGATE DY			*. E	MPENNAGE FLO	W *		*0 70		*TRANSONIC WIN	ID* (	COVINGTON/TBC	*	
S4/5		*LOADS AND PR				LD DATA	*		*		*TUNNEL	*D	A. SARVER	*	
		*RES ON 0.03-			*		*		*		*	*M	M MOSER JR.	*	
. , , , ,		*MODELS (AX13			*		*		*		*	*-D	MS	*	
		*/4 AND 45-0)			*		*		*		+	*		*	
		*ATED 747 CAM			*		*		+		*	*		*	
		*SPACE SHUTTL			•		*		*		*	*		*	
		*ITER IN THE			, u		*		+		*	*		*	
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		*G TRANSONIC	₩TMD *	,	*		ت		•		sk	*		*	
		*TUNNEL	*	,	*		- T-		L		Ψ	•		*	
		* 	*	*	F0% F. T0	TABLECTIOATE	7 611-41	CAT TOANS	***	^ /	*ROCKWELL/	410	H. DYE/RI	*085	-DR-23
EDC		*RESULTS OF P						EAT - I RAIN	*8	0 /	*AEDC -		L. TRIMMER/A		
WTB		*CHANGE PAINT				CE ROUGHNESS			*8 •		*AEDC - *HYPERSONIC WJ			*	·L,
2A		*TRANSFER TES				CTS ON BOUND					*HIPERSUNIC WI				
H54B		+ILIZING O O4				AYER TRANSIT	10*				*D 10000EF (D)	φ-U,	mo	<u>.</u>	
R-151,		+LE 50 PERCEN			*N		*		*		*	-T-		-t	
		*EBODY MODELS			*		*		*		<b>Y</b>	*		-T-	00
		*82-0) OF THE			*		*		*		*	**		م ب	<u> </u>
		*KWELL INTERN			*		*		*		*	₹		- A-	G
		*AL SPACE SHU	TTLE *	k	*		*		*		त्र	*		<b>本</b>	OF POOR
		*ORBITER IN T	HE AE+	r	*		*		*		*	*		*	~ გ
		*DC VKF HYPER	SONIC*	k	*		*		*		*	*		*	χ̈́r
		*TUNNEL B	4	k	*		*		*		*	*		*	
		*	+	k	*		*		*		*	*		*	PAGE QUAL
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					WIND	TUNNEL TEST	/ 1	DMS DATA	PROCES	SSING							26
	*		*		*		*		*MODE!	 L	*	******		*	COGNIZANT	* B	ASIC
TEST	*	DEDODE #1-	*	CONFIGURATIONS		TEST	*	TYPE OF				TESTING	ì	*	TEST DMS	*PUBL	ICATION!
ID	*	REPORT TIT	FLE * 	TESTED	* 	PURPOSE	* 	TEST	*MACH	RANGE	*	AGENCY		* 	PERSONNEL	+OR C	OMMENTS
LARC	- *P	ITOT PRESSU	JRE SU*A	TP ORBITER	*T0	MEASURE TOTAL	*P	RESSURE	*0.004	15 /	* I	APC /		*GEU	RGE C. ASHBY	.I+DMC_I	D-2242
22HT		VEYS ON THE				SSURES IN THE		· LOGONE	*20 0			ARC -			- LARC	*DEC	
445	/*A	RD SURFACE	OF A *		*LEE	SIDE FLOW FI	E*		*20 0						E. VAUGHN	*	, 150
LA85		0045-SCALE			*LD	OF THE ORBITE	R*		*			UNNEL			J. BURST	*	
CR-160.		. ATP SHUTTI			*AT	MACH 20 AND 3	*		*		*	_ · · · · · · · · · · · · · · · · · · ·		*-DM		*	
		TER AT 30 D			+0 D	EGREES ANGLE	0+		*		*			*	•	*	
		ANGLE OF A			*F A	TTACK	*		*		*			*		*	
		ND MACH 20			*		*		*		*			+		*	
		E LARC 22 1			*		*		*		*			*		*	
		LIUM TUNNEL	_(LA85+		*		*		*		*			*		*	
	*)		*		*		*		*		*			*		*	
ARC	- +T	DANCONTO CT	*	DD1770 4464/0/0	*		*		*		*			*		*	
11TWT	_ ~ I	KANZONIC ZI	ABIEL*U	RBITER-140A/B/C=	*10	OBTAIN TRANSON	N*FI	DRCE	*0.019			ARC /			GAMBLE, J U		
200-1	- A	RACTERISTIC	COL CH*B	26 C9 E43 F8 M16					*0 6			RC -			OOD/USC	*VOLU	
LA77		0.015-SCAL				ON CONTROL SUI			* 1 2						RY PARRELL/R		, 1980
		OTELY CONTR				E LINEARITY A			*			IIC WIND				*	
OK 131,		LEVON) MODE				ENSITIVITY TO			*		*[	. (UNITAR	,		R EDWARDS	*	
		O OF THE SP				H NUMBER FOR 1 -CUT SPEEDBRAF			<b>Y</b>		*			*-DM	S	*	
		UTTLE ORBIT				BODY FLAP, AND			*		**			*		*	
		TED IN THE				DER DEFLECTION			*		T			ж		*	
		RC 11-FOOT				ND TO INVESTIG			- <b>T</b>		<b>本</b>			**		*	
		NIC WIND TU				THE INTERACT								本 山		*	_
	*(	LA77)	*			EFFECTS OF MUT			*		*			*		•	<u> </u>
	*	•	*			CONTROL SURFA			*		*			**		- T - ₩	~ ~
	*		*			DEVLECTIONS	*		*		*			akr		**	~ ~ 2
	*		*		*		*		*		*			*		*	0 2
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	* BASIC	COGNIZANT	*			*	*MODEL		*		*		*			*	
S	*PUBLICATIONS	TEST DMS	* 7	٧G	TESTIN	SCALE*	*	TYPE OF	*	TEST	*	CONFIGURATIONS	*			*	TEST
	*OR COMMENTS	PERSONNEL	*	Ý	AGENCY	RANGE*		TEST		PURPOSE	*		*	ORT TITLE	R		ID
-													<del>-</del>				
	D*DMS-DR-2344	GAMBLE, J UNI	*J 6	/	LARC	/ *	*0 015	ORCE	NSOM∗F	DRTAIN TRA	= * TN	ORBITER-140A/B/C=	T + D	NITO STABIL	DAI	- +TI	RC
	*VOLUME 02	vood/Jsc			ARC		*0 6	0.,00	C DA*	AERODYNAMI	6*IC	326 C9 E43 F8 M16	CH+R	CONTROL C	V .	~ *T	ŧ⊤WT
0	*JAN , 1980	RRY PARRELL/RI	O+HARR	TRANSO	11-F00T	*	* 12			ON CONTROL							00-1
	*	W. BALL	E*J %	TUNNE	NIC WIND	*	*			E LINEARIT				15-SCALE (F			77
	*	R EDWARDS	*C F	ARY)	L (UNITA	*	*			ENSITIVITY				CONTROLLE			
	*	4S	*-DMS	•	•	*	<b>+</b>			H NUMBER F				N) MODEL 44			
	*		*			+	*			-CUT SPEED				THE SPACE			
	*		*			*	*			BODY FLAP.				ORBITER	_		
	*		*			*	*			DER DEFLEC	-			IN THE NASA	- ,		
	*		*			*	*			ND TO INVE				1-FOOT TRAN		_	
	*		*			*	*			THE INTER	-			VIND TUNNEL			
	*		*			*	+			EFFECTS OF			- ·			*(1	
	*		*			*	*			CONTROL S				,	LA	- ( )	
	*		*			*	*			DEFLECTION	–		*				
	*		*			*	*		*	54, 550, 50.	*		*			·	
	C*DMS-DR-2345	E. RAMSEY/MSF	*P 5	/	MSFC	- *	*1 46	ORCE	CH4 *F	STUDY POLITS		146-INCH SRB/TRUN	1	WANTE DOLE	EDI	_ + A1	SFC
В	*OCT . 1978	W SPARKS		<u>-</u>	MSFC		*3 48	01101	(TO *	TEDISTICS	1 *DAC	CATED NOSE (MODEL	_ U+C	TEDICTICE	LIAL	- *A	STUT
	*	M MOSER JR	N+M M	TRISON			*			AIN IMPROV				00548 SCAL			45 45
	*				IC WIND		*			MORE ACCUR		,		NCH SOLID R			43 421F
	*	· <del>-</del>	*			*	*			LING MOMEN				BOOSTER RE			4-X
	*		*			*	*			ON SRB BY				CONFIGURATI			
	*		*			*	·			SENSITIVE							78195
	*		*			*	· ·			COMPONENT				FC MODEL NU	•		
	*		*			4				ALANCE NO				B6) OVER A			
	*						<b>.</b>		24*	ALANCE" -NO				OF THE RE			
	*		*			· ·	* *		*		<b>*7</b>			FLIGHT REGI			
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	*					- T	<b>-</b> *		*		**		4I%	INCH TRISON			
	*		Ţ.			*	*		*	,	*		*	TUNNEL	W	*C	
	*DMS-DD-2346	J. DAILEDA, J	т - ш.1	,	nookliet 1	/ 4	* 046		*		*		_ +			*	
	*VOLUME 01	ROQUIN/RI			ROCKWELL	•	*0 010	UKCE		OBTAIN PRO				TS OF SRB S			EDC
R	*JAN., 1978						* 45			FORCE AND				ION TESTS L			ATA
J	*UAN., 1976	E. VAUGHN					* 45			DATA FOR O				4E O 010-S0			1A
	T	M. MOSER JR		L (A)	D TUNNEL	*	*			ND SRB WIT				V MODEL 75-			1142
	т ш	15	*~DMS			*	*			ER SEPARAT			VK*	THE AEDC \			₹-151,
	4F ub		*			*	*		FFEC*	OR PLUME E			*	NEL A	T	*F	
	<b>本</b>		*			*	+		*		*TS		*			*	
	*		*								*						

	WIND TUNNEL TEST /	DMS DATA	PROCESSING		270
* * * CONFIGURATIONS ID * REPORT TITLE * TESTED		* * TYPE OF * TEST	*MODEL *  * SCALE* TESTING  *MACH RANGE* AGENCY	* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
*RBITER (MODEL AX1+ *284 E-6) COMBINAT* *ION IN THE UNIVER*	**BASE TO DEFINE A *ERODYNAMIC CHARAC	* * * * * * * * * * * * * * * * * * *	* *D TUNNEL (A)  * *  * *  * *  *O 010		*VOLUME 02 *JAN , 1978 *  *  *  *  *  *  *  *  *  *  *  *  *

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		·					·					*				· ·	· k	·	*MOD	 FI	:	*			*	COGNIZANT		* BASIC	
TEST		*					*	СПИ	FIG	URATI	กพร	*		TES	ST	*		TYPE OF			ALE	*	TESTING		*	TEST DMS		*PUBLICATION	JNS
ID		* [	REPO	RT	TITL	Ε	*	<b>V</b>		STED		*	P	URPO		*	k	TEST	+MAC	H RA	NGE:	*	AGENCY		*	PERSONNEL		*OR COMMENT	ſS
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₩										ALONE						IN *		JRCE	*		)4 )5/		EING /			ING CO.		*VOLUME 01	10
TWE	- ,	* CH/	ARAC	TER	21511	CS	*74	47-1	00	WITH	CAM	*GRU	JUND	- EFI	PECI	UN 3	,									HERSEY			980
78									11	KITS	ATT								+ 0				NNEL M SPEED	WING		W KLUG		*OOME, 15	,50
158					E MO											AND *			* 0	מו			MAINEF		*-DN			Ψ.	
160,																			*			*			* - DIA	45		T	
										то т	HE								*		•	*			*			* *	
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		+ I T \	OF	WA	SHIN	GTON	<b>J</b> +									D CO			*		,	*			*			*	
		+AE	RONA	UTI	CAL	LAB	*									OR 42			*		-	*			*			*	
		+0R/	ATOR	Y F	K	KIRS	*					* 5	DEG	II.	NCID	ENCE	k		*		•	*			*			*	
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		+CA	158)				*					*				×	k		*		•	*			*			*	
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17		*D \	/IND	ΤĹ	INNEL		+T:	S 1				*ICA	TIO	N PI	ROGR.	AM ×	k		* 0	15	2	*TU	NNEL		*-DN	1S		*	
₹-151,							*01	RBIT	ER	B26	1091	E*(CA	M)	EFI	FECT	S OF*	k		*		,	*			+			*	
		* 0	4-SC	ALE	747	MOE	+4	4F8M	16R	5V8W1	16	*F1/	۱P.	STA	BILI	ZER '	۲		*		•	*			*			*	
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					WIND	TUNNEL TI	EST /	DMS DATA	PROCE	SSING					272
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NDI AD		TOUT TO OF THE													
NRLAD LSWT	- */	1238 USING THE	1 U*U1 3S*00	RBITER 102 FOREE DY		BTAIN LO		ORCE	+0 18 +0 25		*ROCKWELL, *NRLAD		R B RUSSELL/ R R.BURROWS/		
764 0A238		/ VEHICLE 102 ( D-SCALE FOREBO				DE PROBE			*		*LOW SPEE	D WIND*	W. B. MEINDE	RS *	,,,,
		MODEL NO. 99-0				HT TEST I SURE DATA			*		*TUNNEL *	*	*-DMS	*	
		HE NAAL LOW S			*THE	OML FORE	30DY *		*		*	*	•	*	
		ED WIND TUNNEL INVESTIGATE AI				L 99-0, / NVESTIGA			*		*	*		*	
		DATA SYSTEM CH	ARA*		*DEL	BLOCKAGE	AND *		*		*	*	k	*	
	*(	TERISTICS	*			EFFECTS ( POSITION			*		*	<b>3</b> 4	k 	*	
	*		*		*BE \$	CALE AND	PROB*		*		*	*	· *	*	
	*		*			LL ANGLES RECORDED			*		*	*	<b>k</b>	*	
	*		*			LEVELS	* *		*		*	*	, ,	*	
LARC	*	STUDY OF TOAL	*	DITTD 4404/B/O	*	25222	*	anar	*		*	, *	* 	*	
8TPT	- *1	IC BETA HYSTE	RES*B2	BITER 140A/B/C 6C9E43F8M16N28	*IHIS	KEPURI ! THE RESUI	PRESE*F _TS Ø*	URCE	_	.015/ 7-			×BERNARD SPEN¢ ×R / LARC	CER J*DMS-DI *JAN .	
758 LA91	/*1	S OF AN 0 015	SC*R5	W8V	*F AN	INVESTI	*OITAE		* 1 :	2	*8-F00T T	RANSON+	GEORGE M WAI		
	383+(	LE MODEL 44-0 SPACE SHUTTLE	* 0R*			THE NASA 8-FOOT	-		*		*IC PRESS! *NNEL		*ARC *J. W BALL	*	
	*E	SITER TESTED IN	√ T*		*ONIC	PRESSURI	TUN*		*		*	*	G. W KLUG	*	
		IE NASA/LARC 8: IT TRANSONIC)	-FO* *			OF THE BE RESIS EF			*		*	*	-DMS	*	
	*F	RESSURE TUNNEL	- (*			N 0.015			*		*	*	•	*	
	*L	.A91)	*		*S\$V 1	ORBITER	*		*		*	*	•	*	
ARC		UBSONIC STABIL		т		VALUATE 1	THE S*F	ORCE	*0 030	0 /	*LARC ,	/ *	G. M. WARE, E	SP∗DMS-DF	R-2353
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CR-160,		SHUTTLE ORBIT				TER IN TH			*		*L (UNITA		S. R HOULIHA	AN *	
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		N THE NASA/ARC			*		+		*		*	*	•	*	
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TEST	- <b></b> -	* *	 pennol	 TITLE	* *		 IGURATI TESTED	* DNS + *		TEST RPOSE	* * *	TYPE 0			SCALE:	* * TESTING * AGENCY	* * *		*PUBLI	SIC CATIONS MMENTS
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AEDC SWTA P8A143 CR-151, TM-X 1 AEDC SWTA P8A14351, TM-X AEWTA P8A4351, TM-X AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA AEWTA CR-151,	-/,401 /,402 /,403	*/************************************	RATION G THE SSV M TUNNEL SULTS G THE SULTS G THE SULTS G THE SIN THE SULTS SIN THE SIN TH	OF SREATED	S SC-0 K * * * * * * * * * * * * * * * * * *	ODEL (	75-OTS 75-OTS	* * * * * * * * * * * * * * * * * * *	O COMPOIDS INTERPARATE TA BASELUME-OFF TO COMPOIDE TA BASELUME TA BASE	LETE DATA N THE SRE ION AERO E FOR BOT N AND PLU CONDITION LETE DATA N THE SRE ION AERO E FOR BOT N AND PLU CONDITION LETE DATA N THE SRE ION AERO E FOR BOT N AND PLU CONDITION LETE DATA N THE SRE ION AERO E FOR BOT N THE SRE ION AERO LETE DATA N THE SRE ION AERO E FOR BOT N AND PLU	**************************************	ORCE ORCE	+45 +** *** *** *** *** *** *** **			*ROCKWELL/ *AEDC - *SUPERSONIC W * * ** *ROCKWELL/ *AEDC - *SUPERSONIC W * * ** *ROCKWELL/ *AEDC - *SUPERSONIC W * * ** ** *ROCKWELL/ *AEDC - *SUPERSONIC W * * * ** ** ** ** ** ** ** ** ** ** **		G. MCDONAL DMS  J. J DAILEI H SPANGLEI J E VAUGHN G MCDONAL DMS  J J. DAILEI H SPANGLEI J E VAUGHN G MCDONAL DMS  J DAILEI H SPANGLEI H SPANGLEI H SPANGLEI H SPANGLEI H SPANGLEI H SPANGLEI	R /RI * VOLUM	E 01 1978 R-2354 E 02 1978 R-2354 E 03 1978 R-2354 E 04
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				WIND '	TUNNEL TEST	/	DMS DATA	PROCES	SSING						274
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TEST	*	*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING			DMS	*PUBLICA	
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EDC -	- +RESULTS OF TE	CT 0+5	47 C7 E00 E7 M4	4TO 1	MVECTICATE A	. = 40	EAT-TRANS	· 47 O	_	*ROCKWELL/	4.13	.1 .6	RIFALL/RI	*DMC_DD_	0055
	*H49A OF THE .				NAMIC HEATIN		EAT-TRANS	*8 O		*AEDC -			MARTINDALE,		2355 1977
	3/*-SCALE SPACE		104		CTS DURING I			*		*SUPERSONIC W			AUL/ARO	**************************************	15//
H49A	*TLE ORBITER M			*NTRY				<u>.</u>		*D TUNNEL (A)		E 1	AUL/ARU	•	
	66*22-0 CONDUCTE			*(A11K1		*		T		*O TORNEL (A)	4			ale	
	*THE AEDC VKF					. T		<u>.</u>		4	*			*	
	*NEL B TO DETE			*		-		•		<b>+</b>	*			*	
	*E AERO HEATIN			*						±				*	
	*ARACTERISTICS			ale:		*		*		*	*			*	
	*	*		sk:		*				· •	*			*	
	*AERODYNAMIC H						EAT-TRANS			+ROCKWELL/		-	ERRERA/RI		-
	- *NG RESULTS OB /*ED DURING TES				S OF PROTUBI	-		*7 90 *8 0		*AEDC - *HYPERSONIC W	*D		IARVER IOSER JR	*MAY,	1977
H60	*60 CONDUCTED				S ON AERODYN HEATING ON T			*8 U		*HYPERSUNIC W			IUSEK UK	* *	
	34*HE AEDO VKF T				ORBITER FUS			**		*D IDMMET (B)	Ψ-D	/INI D		т •	
K-151,00	*L B USING THE				NOSE. CANOL			*		**	- A			<b>.</b>	
	*40-SCALE MODE				D SIDE WALL!			-		4 	<b>-</b>			<u>.</u>	
	*-O OF THE SPA			* , AN	D SIDE WALL	٠ ·			•	ж -	<b>.</b>			T.	
	*HUTTLE ORBITE			•				Ţ		<b>*</b>				**	
	*RWARD FIFTY P			•		•		•		T J				*	
	*NT FUSELAGE	EROL.		*		*		- -		<b>*</b>	•			*	
	*	, L		T				ı		•				*	
RC -	*RESULTS OF AS	CENT*T	NITECOATED VEHIC	************	TAIN AEDDD	/N#14	EAT_TOANS		175 /	*ROCKWELL/	* W	ת א	YE/RI	*DMS-DR-	2357
	*AERODYNAMIC H				HEAT TRANS		CAT TARRE	*53		*ARC -	*S		HOULIHAN	*JUNE.	1983
	/*ING TESTS ON							*7 4		*3 5-FOOT HYP	-			*	
H68	•	_	RBITER, TANK, AN			-		*		*SONIC WIND T				*	
	55*ENT VEHICLE,			*URAT		*		*		*NEL	*			*	
,	*ACH 5 3 AND 7		One neum	*		*		*		*	*			*	
	*N THE NASA/AM			*		*		*		· *	*			*	
	*.5-FOOT HWT,			*		*		*		*	*			*	
	*G THE 0 0175-			*		*		*		*	*			*	
	*E MODEL 60 OT			*		*		*		*	*			*	
	*H68)	*		*		*		*		*	*			*	,

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								WIND T	UNNEL TE	ST /	DMS DATA	PROCES	SING					275
	·				*			*		*		*MODEL	<i>-</i> 1	 r	*	COGNIZANT	* BAS	ic
TEST	*				*	CONFIGURA	TIONS	*	TEST	*	TYPE OF		SCALE	TESTING	*	TEST DMS	*PUBLIC	ATIONS
ID	*	REPORT	TIT	LE	*	TESTE			PURPOSE	*	TEST	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR COM	IMENTS
							<b>-</b> -											
DC	- *^	EBUDYNI/	MIC	HEATI	ren	RWARD 50	PERCEN	*TO IN	VESTIGAT	F	IFAT-TRANS	+0 04C	3 / +	ROCKWELL/	*W	H DYE/RI	*DMS-DR	-2358
						FUSELAGE,						*7 90		AEDC -		A SARVER	*JUNE.	1977
A		D DURIN							ON AERO			*8 00		HYPERSONIC WI	N*M	M MOSER JR	*	
50B		OB COND	-						ON NOSE			*	4	D TUNNEL (B)	* ~DM	1S	*	
	_	HE AEDO							SIDE WA			*	4	r	*		*	
, .		L B US						*		*		*	*	k	*		*	
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	ΨE	ORBITE	R FO	RWAR	<b>)</b> *			*		*		*	k	*	*		*	
	+F	IFTY PE	RCEN	T FU	*			*		*		*	k	k	*		*	
	<b>+</b> S	ELAGE			*			*		*		*	4	k	*		*	
	*				*			*		*		*	4	k .	*		*	
LSPAN	- *R	ESULTS	OF H	EAT 3	r*RO	CKWELL VE	HICLE	*OBTAI	N SPANWI	SE H*H	IEAT-TRAN	*O 025	•	ROCKWELL/		BERTHOL/ROC		
HST	- *R	ANSFER	TEST	ING (	)+3	(MODIFIED	) SHUT	*EAT T	RANSFER I	RATE*		*9.88		CALSPAN -	*ELL		*MARCH,	1978
11	/*F	AN O	25-S	CALE	* T L	E ORBITER	MOD	*DISTR	IBUTIONS	0N *		*10 0		96-INCH HYPE		GOROWITZ/ROCH	(WE*	
166	* M	ODEL (6	6-0)	OF	*EL	. 66-0		+THE L	EADING E	DGE *		+		FONIC SHOCK TO			*	
2-151,4	105 * TI	HE SPAC	E SH	UTTL	*			*OF TH	E GLOVE	AND *		*		NEL	_	E VAUGHN	*	
	*0	RBITER	CONF	I GUR	*				ESPECIA			*	k	•	*-DN	IS	*	
	<b>+</b> ∆	TION 14	OB I	N THE	*			*SHOCK	INTERFE	RENC*		*	4	r	*		*	
	+Ç.	ALSPAN	HYPE	R-	*				KS OBT			*	4	<b>k</b>	*		*	
	*5	ONIC SI	10CK	TUNN	<b>:</b> +				TRANSFER			*	4	•	*		*	_
	*L	(OH66)	)		*				TIONS NO			*	k	<b>,</b>	*		*	⊆
	*				*				LEADING			*	×	۲	*		*	.,
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	*				*			<b>+LOCAT</b>	IONS.	*		*	4	<b>k</b>	*		*	Ç
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	WIND TUNNEL TEST / DM:	DATA PROCESSING		276
*	*	+MODEL *	* COGNIZANT *	BASIC
TEST * * CONFIGURAT	IONS * TEST * T			PUBLICATIONS
ID + REPORT TITLE + TESTED		EST *MACH RANGE* AGENCY	* PERSONNEL *C	OR COMMENTS
				~~
- +CALIBRATION TESTS+ORBITER VEHI	CLE 1*MEASURE AIR DATA *FOR	E +0 10 / *ROCKWELL/	*A.R GROSS/ARC *E	DMS-DR-2360
SWT - +OF THE SPACE SHU +O2 FOREBODY	*SYSTEM PROBE PITO*		*T.J DZIUBALA/R.I.*\	
9-1 /*TTLE ORBITER PRIM+	*T AND STATIC PRES*	*3.5	rW. B MEINDERS *1	DEC , 1980
WT - *ARY AND ALTERNATE*	*SURE ERRORS; DETER*	+ *OT SUPERSONIC		
/+AIR DATA SYSTEMS *	*MINE PROBE SCALE *	* *WIND TUNNEL (U	*	
21B/C +USING A O 10-SCA *	*EFFECT ON THE STA*	142 11141 /	* *	
160,521*LE ORBITER FOREBO*	*TIC PRESSURE CALI*	* *8-FOOT BY 7-FO		
*DY MODEL (99-0) I*	*BRATION, CALIBRATE*	* *OT SUPERSONIC		
*N THE NASA AMES R*	*THE ANGLE-OF-ATTA*	+ +WIND TUNNEL (U	*	
*ESEARCH CENTER 9 *	*CK SENSOR, EVALUA*	* +NITARY)	* *	
*X 7 AND 8 X 7-F00+	*TION OF BOTH FLUS*	* *	*	
*T LEGS OF THE UNI*	*H PORT AND INSTRU*	* *	* *	
*TARY PLAN WIND TU*	*MENTED REACTION C*	*	# <i>1</i>	
*NNEL (QA221B AND *	*ONTROL SYSTEM THR*	* *	* *	
*C ) *	*USTER AIR DATA SY*	* *	r *	
* *	*STEMS *	* *	* *	
* * * * * * * * * * * * * * * * * * *	* * OF TAMESCURE ATD DATA HEDD	E *0.10 / *RDCKWELL/	*A R GROSS/ARC *1	DMS-DR-2360
- *CALIBRATION TESTS*DRBITER VEHI WT - *OF THE SPACE SHU *02 FOREBODY			·	VOLUME 02
WT - *OF THE SPACE SHU *O2 FOREBODY -1 /*TTLE ORBITER PRIM*	*SYSTEM PROBE PITO*  *T AND STATIC PRES*	*3.5		DEC , 1980
VT - *ARY AND ALTERNATE*	*I AND STATIC PRES* *SURE ERRORS:DETER*	* *OT SUPERSONIC		
/*AIR DATA SYSTEMS *	*MINE PROBE SCALE *	* *WIND TUNNEL (U		
1B/C *USING A O.10-SCA *	*EFFECT ON THE STA*	* *NITARY)	* *	
160.522*LE ORBITER FOREBO*	*TIC PRESSURE CALI*	* *8-FOOT BY 7-FO	* *	1
*DY MODEL (99-0) I*	*BRATION: CALIBRATE*	* *OT SUPERSONIC		00
*N THE NASA AMES R*	*THE ANGLE-OF-ATTA*	* *WIND TUNNEL (U		五之
*ESEARCH CENTER 9 *	*CK SENSOR: EVALUA*	* *NITARY)	* *	(G)
*X 7 AND 8 X 7-F00*	*TION OF BOTH FLUS*	* *	* *	o o ラ
*T LEGS OF THE UNI*	*H PORT AND INSTRU*	* *	* *	ŎÞ
*TARY PLAN WIND TU*	*MENTED REACTION C*	* *	* *	ORIGINAL OF POOR
*NNEL (DA2218 AND *	*ONTROL SYSTEM THR*	* *	* *	
*C ) *	*USTER AIR DATA SY*	* *	* *	PAGE
*	*STEMS *	* *	* *	PAGE IS
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					WIND TUNNEL	TEST / I	OMS DATA	PROCESS	ING					27
TEST ID		P REPORT TIT	* * *	CONFIGURATIONS TESTED	* + TEST + PURPOS		TYPE OF TEST	*MODEL * S *MACH R	CALE*	TESTING	* *	COGNIZANT TEST DMS PERSONNEL	*PUBL	ASIC ICATION OMMENTS
NRLAD LSWT 768 0A163B	3704 3704 3714 3714	*ING GEAR LOA *ST USING A O *-SCALE MODEL *O) OF THE SP *HUTTLE ORBIT *THE ROCKWELL *ERNATIONAL N *IND TUNNEL ( *B)	DS TE*8 0 0405* . (16-* PACE S* EER IN* . INT * . INT * . LAND*E . DS TE*8 . O405* . (16-* . (16-* . INT *	368C12E55F10M16N2	*OBJECTIVE W. *VERIFY ORBI' *NDING GEAR: *PRESSURE LO. *AND HINGE M. *LEVELS OBTA. *DURING THE *ERIOD OA163 *	AS TO *PI TER LA* SYSTEM* ADING * INED * TEST P* * TEST PF AS TO *PI TER LA* SYSTEM* ADING * OMENT *	RESSURE	*0 0405 *0 17 - * * * * * * * * * * * * *	K K K K K K K K K K K K K K K K K K K		*ELL WIND*D W *G *-DN * * * * * * * WIND*D W	W KLUG S MENNELL/RO INTERNATIO HERSEY W KLUG	NAL * VOLU * OCT . * * * * * * * * * * * * *	ME 01 , 197 DR-2361 ME 02
LARC TDT 246 OS7 CR-151,	- ; /; .057;	*IND TUNNEL ( +B)  * *RESULTS OF F *R TEST OS7 O *ED USING THE *-SCALE SPACE *TLE ORBITER *UDDER MODEL *R 55-0 IN TH *A LARC 16-FO *ANSONIC DYNA	DA163*  * * * * * * * * * * * * * * * * * *	55-0 (FIN, RUDDER )	*ERIOD 0A163 *	* * * ATE FL*S	FRUCT −DYħ	* * * * +095 - *1911 * * *	k k k	ROCKWELL/ LARC - TRANSONIC MICS TUNNE	*F. DYNA*ERF L *GRU *D.	L BERTHOLD RAUCH, G. C ORD, T. FOL MMAN A SARVER M MOSER JR	OMM*APRI EY/* *	
		*WIND TUNNEL *	*		*	*		*	k k	*	*		*	OR QUALITY

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				WIND 1	TUNNEL TE	ST /	DMS DA	TA PROCES	SSING					27
*		*		*		*	k	*MODE!	L *		*	COGNIZANT	* BAS	SIC
TEST *		* C	ONFIGURATIONS	*	TEST	*	▶ TYPE			* TESTING	*	TEST DMS	*PUBLIC	MOITAC
ID *	REPORT TITLE	* 	TESTED	*	PURPOSE		* TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COM	MENTS
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	TIGATION TO VE							E *2.5 *		ARC -		WELL INTERNA		
	Y SHUTTLE ORBI VEHICLE 102							*		*9~FOOT BY 7~ *OT SUPERSONI		IL SPACE DIVI	.51*rtB.,	198
	RO CHARACTERIS							* *		*WIND TUNNEL		M MANN	*	
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				WIND	TUNNEL TES	т /	DMS DATA	PROCES	SSING					279
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	*	*		*ODEL				4 3		T 4	*		*	QUALITY
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	- *RESULTS OF F						31 KUC1 - U11	*0.3	-	*LARC -	*AR			L. 1977
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	*THE NASA LAR			*		**		*	•	*			T 4	
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ITB -	- *SE CHANGE PA	INT T*4			AERODYNAMI			*7 88		*AEDC -		L. TRIMMER/A	KU*MA1,	1977
B-83A	/*ESTS OF 0.01	75-SC*		*EATI	NG EFFECTS	*		*8 0		*HYPERSONIC WI			*	
125B	*ALE MODEL (N	1O. 56*		*		*		*		*D TUNNEL (B)			*	
-151,00	63*-0) OF THE R	OCKWE*		*		*		*		*	*-DI	MS	*	
	*LL INTERNATI	ONAL *		*		*		*	•	*	*		*	
	*SPACE SHUTTL	.E OR*		*		*		*	:	*	*		*	
	*BITER IN THE			*		*		*	:	*	*		*	
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	×	•	*			*	k		*		*MODEL	. ,	•	*	COGNIZANT	* BASIC	
TEST	*		*		NFIGURATIO	ONS *				PE OF				* T	EST DMS	*PUBLICAT	IONS
ID	* 	REPORT	TITLE *		TESTED	×	* PURPI	DSE	* T!	EST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COMME	NTS
57A/B -151, -151, -151, -172 -172	-	ANGLE-OF- AERO HEAT SURE TEST 0175-SCAL (92-0) OF SPACE SHL BITER IN VKF TUNNE 57A/B)  RESULTS C CHANGE HE FER TEST NG 0.006- ACE SHUTT ER MODELS D 90-0 AN L WING O LE MODEL THE LARC CFHT	ING PRES* ON A O.* LE MODEL * THE OV-* GURATION* TITLE OR * THE AEDC* LE B (OH * PF PHASE * AT TRANS* SCALE SP* LE ORBIT* LE ORBIT* 46-0 AN* ID PARTIA* 0175-SCA* 64-0 IN * 31-INCH *	TER 70-0 MODE 90-	102, DRWG 00002B	VC - * * * * * * * * * * * * * * * * * * *	OBTAIN STATES ON LOWER VERSION LOWER VERSION TAIL FOR TAIL FOR TAIL FOR TAIL FOR TAIL FOR TAIL WINGS OUS POSITE OUS POSITE OF TO OBTAIN	UPPER A ING SUR VERT LOW FIE TON  GATE PH PAINT FECTS O AND PAR WING T SHOCK AT VARI ONS	** ** ** ** ** ** ** ** ** ** ** ** **	-TRANS	*7 94 *8.0 * * * * * * * * * * * * *	6 / × × × × × × × × × × × × × × × × × ×	*AEDC - *HYPERSONIC WIN *D TUNNEL (B)  *ROCKWELL/ *EARC - *CONTINUOUS-FLC *W HYPERSONIC T	*****  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  **  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  **  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  **  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  ***  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **  **	VAUGHN CUMMINGS/RI HERSEY MOSER JR.	*MAY.  *  *  *  *  *  *  *  *  *  *  *  *  *	368 1977
IT			ILITY WI*		KEENIKT GL		ORCE DATA			2	*0.4 *0.9		•		•	*DMS-DR-2 *FEB	369 1982
			TEST OF*				AT REENTRY				*		HIGH REYNOLDS			*	
1F			SCALE *			*	UMBERS AND	UTITTA	*		*		NUMBER WIND TU			*	
167,			THE SPAC*			*	DES		*		*		NNEL	*		*	
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			OSTER RE*			*			*		*	sk	k	*		*	•
	*	ENTRY CON	FIGURATI*			*	•		*		*	*	·	*		*	•
	*	ON (MSFC	MODEL 48*			*	,		*		*	*	·	*		*	(
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			EYNOLDS *			*	;		*		*	H	•	*		*	
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					WIND	TUNNEL TEST	/	DMS DATA	PROCE	SSING				281
	*		*		*		*		+MODE			*	COGNIZANT	* BASIC
TEST ID	· *	REPORT TITLE	* (	CONFIGURATIONS TESTED	*	TEST PURPOSE	*	TYPE OF TEST		RANGE	* TESTING * AGENCY	*	TEST DMS PERSONNEL	*PUBLICATIONS *OR COMMENTS
														******
ARC	- *!	RESULTS OF TEST U	*R70	0C9F44F9M16N28R	*DETE	RMINE FORCE	/P*F	ORCE	*16	_	*ROCKWELL/	*E	CHEE/ROCKWELL	*DMS-DR-2370
97SWT	- *	SING A O.O30-SCAL	*5V8	W116(ORBITER)	*RESS	URE DATA AT	H*P	RESSURE	*3 5		*ARC -		TERNATIONAL	*VOLUME 01
115-1		PRESSURE LOADS			*IGH	ALPHA/BETA (			*				MARROQUIN/ROCK	
87SWT	- *	SPACE SHUTTLE ORB	*				+		*				LL INTERNATION	· /*
115-1		ITER MODEL (47-0)				RANGE 1.6	TO+		*		*WIND TUNNEL (			*
		IN THE NASA/ARC			*3 5		*		*		*NITARY)		M MANN	*
CR 151,		JNITARY PLAN WIND	*		*		*		*		*8-FOOT BY 7-F		M2	*
	*	TUNNEL	*		*		*		*		*OT SUPERSONIC *WIND TUNNEL (			*
	*		*		*		*				*NITARY)	u +		*
	*		*		*		**		*		'NITAKT) *	*		*
ARC	_ 41	RESULTS OF TEST U	*07/	NODE A A COM LENG OF	*NETE	DMINE EDDCE	/D*E	OPCE	+1 6	_	*ROCKWELL/	*E	CHEE/ROCKWELL	*DMS-DR-2370
97SWT		SING A O O30-SCAL							*3 5		+ARC -		TERNATIONAL	*VOLUME 02
115-1		PRESSURE LOADS				ALPHA/BETA		KESSOKE	+				MARROQUIN/ROCK	(*APRIL, 1980
87SWT		SPACE SHUTTLE ORB					*		*		*OT SUPERSONIC	*WE	LL INTERNATION	<b>\</b> *
115-1		TER MODEL (47-0)				RANGE 1 6	ro*		*		*WIND TUNNEL (			*
		IN THE NASA/ARC			*3.5		Ψ.		*		*NITARY)	*M.	M MANN	*
		JNITARY PLAN WIND			*		*		*		+8-FOOT BY 7-F	0 * - D	MS	*
, ,		FUNNEL.	*		*		*		*		*OT SUPERSONIC	*		*
	*		*		*		*		*		*WIND TUNNEL (	U+		*
	*		*		*		*		*		*NITARY)	*		*
	*		4		*		*		*		*	*		*
ARC	- +	RESULTS OF TEST U	*870	C9E44F9M16N28R	+DETE	RMINE FORCE,	/P+F	ORCE	*16				CHEE/ROCKWELL	
975WT	- *	SING A O 030-SCAL	*5V8					RESSURE	*3.5		+ARC -		TERNATIONAL	*AOTAME 03
115~1	/*	PRESSURE LOADS	*			ALPHA/BETA (	CO*		*				MARROQUIN/ROC	
87SWT		SPACE SHUTTLE ORB					*		*				LL INTERNATION	<b>1</b> *
115-1		ITER MODEL (47-0)				RANGE 1 6			*		*WIND TUNNEL (		B1 0444151	*
		IN THE NASA/ARC			*3.5		. *		+		*NITARY)		M. MANN	*
CR-151,		JNITARY PLAN WIND	*		*		*		*		*8-FOOT BY 7-F		1412	•
	*	TUNNEL	*		*		*		*		*OT SUPERSONIC *WIND TUNNEL (			*
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ID	*	REPORT	TITLE	*				TE			TYPE O			TESTING		EST DMS	*PUBLIC	
						ESTED	* 	PURP	U\$E	*	TEST	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR COM	MENTS
3	- *R	ESULTS (	F BASE	H+0	RBITER	VEHICLE					EAT-TRA	NS*0.04	/ *	ROCKWELL/	*₩. F	GARTON/RI	*DMS-DR	-2371
			STS ON		2				ATES A			*	*	JSC -	*J. E	VAUGHN	*MAY.	1978
78			LE SPACE						DISTRI			*	*		*~DMS	;	*	
- 151,40			DRBITER				*UTIC	DNS AB	HT TUC	E *		*	*	•	*		*	
			DEL 65-0				*BASE	OF T	HE ORB	IT*		*	*		*		*	
	* I !	N THE NA	ASA/JSC	*			*ER \	/EHICLI	E DURI	NG*		*	*		*		*	
	*1	HERMAL \	/ACUUM C	Н*			*SECO	ND ST	AGE AS	C *		*	*		*		*	
	* <b>∆</b> !	MBER A		*			*ENT			*		*	*		*		*	
	*			*			*			*		*	*		*		*	
DC -	- *R	ESULTS (	F HEAT	T *0	TS		*TO 0	BTAIN	ET AN	D *H	EAT-TRA	NS*3 01	- *	ROCKWELL/	+W ⊩	H DYE /RI	*DMS-DR	-2272
TA ·	- *R	ANSFER 1	TESTS OF	*T,	ANK ALC	ONE			YNAMIC			*4.02		AEDC -		. ALLEN	*NOV ,	1981
1A-R2A	/*A	0.0175	SCALE S	P+LI	EFT SRE	ALONE			ER DA			*		SUPERSONIC			*140 4 ,	1301
72	<b>+</b> Δ(	CE SHUTT	LE INTE	G+R	IGHT SR	B ALONE	*ON 1	HE SP	ACE SH	,,, U *		*		D TUNNEL (A		EDWARDS	•	
-160.84	43*R	ATED VEH	HICLE MO	D*					GRATED			*		D TORNEL (A	*-DMS		- -	
			IN THE						RING L			*	٠,-		# Diric	,	-L	
			TUNNEL					CONDI		*		•	- T		- -		· τ	
		IH72)		*			*	CONDI	10143			*			*		*	
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RC ·	~ *FI	FEECT OF	TATION	N+1	ADC BUT	LT MODEL	*1/501	EV MO	II TMEAI	7 D T 4 C f	DOE		- *	1400 /	**		*	
PT ·	- *F	CUT-DEE	AND ST	T + 20	01-0 0	030 SCALE	TTEE	וטויו נים.	AETEDII AETIAEMI	1812 1812	JKCE	• • •		LARC /		ARD SPENCER		
9	/*N6	CONETO	HIDATION		ev one:	TER WITH	*** DE	ACON I	JEIERM.	1   V ×		*0.6 *		LARC -		NASA LARC	*MARCH,	1981
99	*01	U THE A	DUDALI TOM	1 - DI	EMUTE E											RGE M WARE/	NA*	
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100,0									ESTS O			*		NNEL		MCDONALD	*	
			O SCALE						39 RUI			*	*		*-DMS	;	*	
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			UDDER)						T CON			*	*		*		+	7
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			ARC 8-F	D*			*ONTR	OF DE	LECTIO	*NC		*	*		*		*	č
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TEST		*		*	CONFIGURATIONS		TEST		TYPE OF			* TESTING	*		*OR COMMENT
ID		* REF	ORT TITLE	* 	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	<del>-</del>	PERSONNEL	*OR COMMENT
ALSPAN	_	*INVE	STIGATIONS 1	N+E	320F4M16W87E19V5F	*TO D	ETERMINE ST	IN*F	ORCE	+0.016	55 / [,]	LARC /	*B.	SPENCER/LARC	*DMS-DR-237
TWT			CALSPAN 8-FO				RE EFFECTS			* 03		*CALSPAN -	*G	M. WARE/LARC	*DCT , 19
			RANSONIC WIN			*R THI	E ORBITER W	IT*		* 0 7	,	*8-FOOT TRANSC	U*N€	E. VAUGHN	*
18-113	- 1	*TUNNI	L TO DETERM	1 *		*H TA	ILCONE	*		*	,	*IC WIND TUNNE	EL+B.	J. BURST	*
A82	•	*INE S	TING-TARE	F*		*		*		*		<b>+</b>	*-D	MS	*
A 103			ON A MODIA			*		*		*	,	k	*		*
			0165-SCALE			*		*		*	,	<b>k</b>	*		*
			SHUTTLE ORE			*		*		+	,	*	*		*
			MODEL WITH			*		*		*	;	*	*		*
			ONE (LA82/I			+		*		*	•	<b>k</b>	*		*
		+103)	, , , , , , , , , , , , , , , , , , , ,	*		*		*		*	,	+	*		*
		*		*		*		*		*	,	k	*		*
RC			TS OF AIR I	) + AC	RBITER VEHICLE	*OBTA	IN ORBITER	AI*F	ORCE	*00 11	- `	ROCKWELL/	*R.	R.BURROW/RI	*DMS-DR-237
OSWT			STEM CALIBR				TA SYSTEM L			* 0 27	, ,	*ARC -	*R	L.MAKI/ARC	*DEC , 19
00			TEST USING				ED CALIBRAT			*		*40-F00T BY 80	)-*W.	B. MEINDERS	*
A237	•		. 10-SCALE SF				EMONSTATE T			*		*FOOT SUBSONIC			*
			HUTTLE ORBIT			•	REBODY MODE			*		WIND TUNNEL	*		*
K 100,	_		HICLE 102 FO				PROVIDE FU	-		+		k	*		*
			/ MODEL 99-0				TE FLOW FIE			*	;	r	*		*
			HE NASA 40 X				MULATION AT			*	,	*	*		*
			OOT SUBSONI			-	IR DATA PRO			*		*	*		*
							EMONSTRATE	_		*		, •	*		*
			TUNNEL (OA2	231*			REDICTED BL				,	, b	*		*
		*7)		*			INFLUENCE				,	 k	*		*
		*		*						•			*		*
		*		*			E FOR THE N						*		*
		*		*			UNNEL IS VA	L J T				,	*		*
		*		*		*D		4		·		· 4			*
		*		*		*		/D+#	anor	*O C		ROCKWELL/	* E	CHEE/ROCKWELL	*DMC-DD-227
RC	-	*RESUI	TS OF TEST	U*!	370C9E44F9M16N28F	(*DE 1E)	KMINE FURGE	/25F	DECCURE	*0 6 *1 4		ARC -		TERNATIONAL	*VOLUME 01
17WT					SV8W116(ORBITER)	*8655	UKE DATA AT	ግጥ P	RESSURE	* 1 4				MARROQUIN/ROC	
15			SSURE LOADS				ALPHA/BETA			*				LL INTERNATION	• •
A 149A			SHUTTLE OF				ATIONS FOR	*		*		PNIC WIND FOND PL (UNITARY)	ש≁שנ +L	EL TRICKINATION	n 
R-151,			MODEL (47-0				RANGE O 6	10*		*		TL (UNITAKY)		L. MULKEY	*
			HE NASA/ARC			*1 4		*		*	,	<del>.</del> •		M MANN	
			ARY PLAN WIN	1D.⊀		*		*		*		<del>*</del>		* * * * * * * * * * * * * * * * * * * *	4
		*TUNNI	ĒL,	*		*		*		*	•	*	*-D	MP	*
		*		*		*		*		*		*	*		*

				·	WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING					2
		*	+	•	*		*		*MODE!		*	*	COGNIZANT	* BA	 SIC
TEST			*	COLLY TOOKY LTOINS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLI	
ID		* REPORT T	ITLE *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR CO	
С	-	*RESULTS OF	TEST U*	B70C9E44F9M16N28	R*DETE	RMINE FORCE	/P*F	ORCE	*0 6	-	*ROCKWELL/	* =	. CHEE/ROCKWE	I *DMC-DI	5007
rwr	-	*SING A O.O	30-SCAL+	5V8W116(ORBITER)	*RESS	URE DATA AT	H+P	RESSURE	+1 4		*ARC -		TERNATIONAL	*VOLUMI	
5		*E PRESSURE	LOADS *	•	*IGH	ALPHA/BETA	*00		*				MARROQUIN/R	↑VULUMI	19
149A		*SPACE SHUT	TLE ORB+	•		ATIONS FOR			*		*NIC WIND TH	MME * WE	LL INTERNATION	TONTOMIN.,	19
151,	780	*ITER MODEL	(47-0)+			RANGE O 6			*		*L (UNITARY)		TEL THICKNAIL	TINA T	
	,	*IN THE NAS	A/ARC *	•	*1 4		*		*		*	-	L MULKEY	*	
		*UNITARY PL	AN WIND+		*		*		*		· •		M. MANN		
		*TUNNEL	*	•	*		*		*		•	*-[		<u>.</u>	
		*	*		*		*		*		*	7 "L	כויו/	<b>→</b>	
:		*RESULTS OF	TEST U*	B70C9E44F9M16N28F	R*DETF	RMINE FORCE	/P*F	ORCE	*0.6	~	*ROCKWELL/		CHEE/ROCKWE	1 *ONC D	1027
WT	- :	SING A O.O	30-SCAL*	5V8W116(ORBITER)	*RESS	HRE DATA AT	⊔ж₽	DESCRIBE	*14		*ARC -		TERNATIONAL		
j	/:	<b>*E PRESSURE</b>	LOADS *			ALPHA/BETA		RESSORE	*				MARROQUIN/R	*VOLUMI	: 03
49A		SPACE SHUT				ATIONS FOR			*		WALL HOOL INA	ハアロナバル	MARKUQUIN/RI LL INTERNATIO	JUK*UAN ,	19
151,1	781	ITER MODEL	(47-0)*			RANGE O 6			•		*L (UNITARY)			*ANL	
		IN THE NAS			*1 4	MANUE O O	. U		•		*L (UNITARY)	_		*	
		UNITARY PL			*						T.		. L. MULKEY M. MANN	*	
		*TUNNEL	*		*		- T		т ъ		Ψ.			*	
	4	k	*		·.		т Т		-t-		*	*~L	MS 2MS	*	
:	- 1	RESULTS OF	TESTS *	0 - 140A/B/C/R	*THE	TEST OBJECT:	r 11/4 E	ODCE	*0 01	,	*DOOKHELL!	*		*	
WT.	- *	OF THE O O	10 5041 *	SRB - MODIFIED VE	* 1136	EDE TO OCTA:	1 W 4 F 1	URCE	* 60		*ROCKWELL/		J HAWTHORNE		
3-1	/ 1	E SPACE SH	ITTLE 1*	HICLE 5	*TAIDT	VIDUAL COMPO	7 1/1/4		-		*ARC -		SPANGLER /RI		E 01
44	· ×	NTEGRATED	VFHICLE*	T - MODIFIED VEHI	TINDIA+'	ALDONE COMPL	\ } *		+1 40 *				J. BROWNSON	AR*APRIL	, 19
167 :	3424	IN THE NAS	A /AMES +			NGE MOMENT (			*		*NIC WIND TU			*	
,		RESEARCH C							*		*L (UNITARY)		W HERSEY	*	
		11X11 FOOT				ND THE EFFE SEALING THE			*		**	_	W. KLUG	*	
		NIC WIND TO					_		*		*	*-[	DMS	*	
		MODEL 72-0				IC WING GAP			*		*	*		*	
		IA144	13 1C31*		*14 CO	MPONENT LOAD	JS*		*		*	*		*	
	si.	, TH 144	· ·		*		*		*		*	*		*	
	4	DESINTS OF	TECTO +	D - 140A/B/C/R	*		*		*	_	*	*		*	
WT		WE THE V V	10 5081 41	SRB - MODIFIED VE	*   HE	FEST ORGECT	V*F		*0 01		*ROCKWELL/		J HAWTHORNE		
- 1	/	E SPACE SHO	ITTLE TH						* 60		+ARC -	*.	SPANGLER /RI	*VOLUME	02
44		NITECHATER A	711LE 1*1	T MODITIED WELL	*INDI	VIDUAL COMPO	) *		*1 40		*11-FOOT TRA	120*1	J. BROWNSON	'AR*APRIL,	, 19
	2424	IN THE NASA	VEHICLEY	T - MODIFIED VEHI					*		*NIC WIND TU			*	
107,0	7 زينېدر د	THE PROPERTY OF	AZAMES *I			NGE MOMENT D			*		*L (UNITARY)		W HERSEY	*	
		RESEARCH CI				ND THE EFFEC			*		*	-	W. KLUG	*	
		11X11 FOOT				SEALING THE			*		*	*-D	MS	*	
		NIC WIND TO				IC WING GAP			*		*	*		*	
		MODEL 72-01	IS IEST+		*N CD	MPONENT LOAD	)S*		*		*	*		*	
	*	IA144	*		+		*		*		*	*		*	
			*		*				4.						

		* * * ~ ~ ~ * * * * * * * * * * * * * *	WIND TUNNEL TEST /	DMS DATA PROC	CESSING			285
	*	*	* *	*MOE	DEL *	* COGNIZANT	* BAS	IC
TEST	•	* CONFIGURAT	TIONS * TEST *	TYPE OF *	SCALE* TESTING	* TEST DMS	*PUBLIC	ATIONS
ID.	* REPORT		=	TEST *MAG	CH RANGE* AGENCY	* PERSONNEL	*OR COM	MENTS
RC	- *RESULTS O	F AN INV*MODEL 112-T	*DETERMINE PRESSUR*F		0 25. *ROCKWELL/	*R H.SPANGLER,		
1TWT	- *ESTIGATIO	N OF STA*	*ES ON AN ARRAY OF*P		0 75/ +ARC -	7.1.1.1.2 A = = 1.1.	NIC+MARCH,	1981
12-1	/+TIC AND D	YNAMIC P*	*ROUND AND RECTAN *		0 4- *11-FOOT TRAN		*	
191	*RESSURE D		*GULAR PIPES IN TH*	* *		NE*J C MONFORT, R	R.*	
₹-160,	820*IONS ON E	XTERNAL *	*E PRESENCE OF A F*	*	*L (UNITARY)		*	
	*TANK PROT		*LAT PLATE REPRESE*	*	*	*S. R HOULIHAN	*	
	*S IN THE		*NTING LO2 FEEDLIN*	*	*	*G W KLUG	*	
	*LEG OF TH		*E, GO2 PRESSURE L*	*	*	*-DMS	*	
	*RC UNITAR		*INE,LO2 ANTIGEYSE*	*	*	*	*	
	*IND TUNNE	L (IA191+	*R LINE AND CABLE *	*	*	*	*	
	*).	*	*TRAY AT VARIOUS C*	*	*	*	*	
	*	*	*ROSS FLOW ANGLES-*	*	*	*	*	
	*	*	*TO ALSO DETERMIN *	*	*	*	*	
	*	*	*E DYNAMIC ENVIRON*	*	*	*	*	
	*	*	*MENT AROUND THE S*	*	*	* .	*	
	+	*	*AME ARRAY *	*	*	*	τ 	
	+	*	* *	·	*	* TO U. MULTINOT	n/n+DMC-DD	-0200
SC.			FD3FR*VERIFY ORBITER VE*F		6 - +ROCKWELL/	*R H MULFINGE *DCKWELL INTERN		
ITWT			N109N*HICLE 102 AERODYN*P					1980
18-1			7VT10*AMIC CHAR WITH RE*	*		NSO*ONAL SPACE DIV	131*060.,	1500
145A			SVT14 *GARD TO (1)BASIC*	*	+NIC WIND TU		- <b>T</b>	
2-151,			W131 *STABILITY AND CON*	*	*L (UNITARY)		*	
	*ICS UTILI		*TROL(2)CONTROL SU*	*	**	*-DMS	*	
	* Q5-SCALE		*RFACE HINGE MOMEN*	*	**	*	*	
	*LITY REMO		*TS(3)REYNOLDS *	*	*	*	* *	
	*CONTROL M		*NUMBER EFFECTS(4)*	*	*	本 ···	τ υ	0
	*-0) IN TH		*HYSTERESIS AND CO*	*	*	本 di	*	77
	*ESEARCH C		*NTROL SURFACE INT*	*	*	<b>本</b>	*	"[7
	*ITARY WIN	D TUNNEL*	*ERACTIONS(5) *	*	*	AK Ju	<b>*</b>	Ŏ
	+(OA145A	*	*PROPOSED INBOARD/*	*	*	7 4	τ ₩	OF POOR
	*	*	*OUTBOARD ELEVON I*	*	<b>₹</b>	• • • • • • • • • • • • • • • • • • •	- T	<i>₹0</i> {
	* •	*	*NTERACTION MATH M*	*	<b>*</b> 	* *	*	
	*	*	*ODEL *	*	<b>*</b>	* *	*	$z \simeq z$
	*	*	* *	*	<i>म</i>	T	T	56
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								≺ 🐼

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TEST * * CONFIGURATIONS * TEST * TYPE OF * SCALE* TESTING * TEST DMS * *PUBLICATION OF REPORT ITLE * TESTED * PURPOSE * TEST **MACH RANGE* AGENCY * PERSONNEL **OR COMMENTS*  C - *RESULTS OF AN INV*B75C16664F16FD3FR*VERIFY ORBITER VE*FORCE * 0.6 - **ROCKWELL/ * *R. H. MULFINGER/**DMS-DR-2380 C12-1 /*IFY SHUTTLE DRBIT**1001117820/279710**AMIC CHAR WITH RE* * 1.4 **ARC - **OCKWELL/ **OCKWELL INTERNATI**VOLUME 02 **OCK**OCK**OCK**OCK**OCK**OCK**OCK**OC		*			*		*		*		*MODEL	_ *		*	COGNIZANT	* B/	SIC
- *RESULTS OF AN INV*B75C16E64F16FD3FR*VERIFY ORBITER VE*FORCE	TEST	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF			TESTING	*	TEST DMS	*PUBL1	CATIONS
## - *ESTIGATION TO VER**22HGIMSZN108N:09N*HICLE 102	ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR CO	DMMENTS
## - *ESTIGATION TO VER*22HGIMSZN108N10SN+HICLE 102 AERODYN*PRESSURE *1 4 *ARC **OCKWELL INTERNATI**VOLUME 02 **I*I*Y SHUTTLE DRBIT**10N11*1R20V2*VT10**ANIC CHAR WITH RE* ** ** ** ** ** ** ** ** ** ** ** ** *														~			
## - *ESTIGATION TO VER*224GIM52N108N109N*HICLE 102 AERODYN*PRESSURE * 1 4 **ARC **OCKWELL INTERNATI**VOLUME 02 **ITY SHUTTLE DRBIT**10N111R20V2TY10**ANIC CHAR WITH RE* ** ** **IT**POUT TRANSO**ONAL SPACE DIVISI**DEC , 198 **IS**POUT TRANSO**ONAL SPACE DIVISI**DEC , 198															=	(D.D.O.	
-1 /*IFY SHUTTLE ORBIT*110N111R20V27VT10*AMIC CHAR WITH RE*  45 AF WEHCLE 102 *VT11VT12VT13VT14 *CARD TO. (1)BASIC*  **151,802*AERO CHARACTERIST*VT15VT16VT17W131 **STABILITY AND CON*  **1CS UTILIZING AN **  **COS-SCALE HI-FIDE*  **RTAC; HINGE MOMEN*  **CONTROL MODEL (39*  **CONTROL MODEL (39*  **NICW STROL **  ***  **CONTROL MODEL (39*  ***  ***  ***  ***  ***  ***  ***											-		· · · - · · · · · · · · · · · · · · · ·				
## VEHICLE 102 *VT11VT12VT13VT14 *GARD TO. (1)BASICO*  *IS1,802*AERO CHARACTERIST*VT15VT16VT17V131 *STABILITY AND CON*  *ICS UTILIZING AN * ***  **O5-SCALE HI-FIDE* ***  **CONTROL MODEL (39**  **O1 IN THE AMES R**  **O2 IN THE AMES R**  **O3 IN THE AMES R**  **O3 IN THE AMES R**  **O4 IN THE AMES R**  **O4 IN THE AMES R**  **O5 IN THE AMES R**  **O4 IN THE AMES R**  **O5																	
151,802*AERO CHARACTERIST*VT15VT16VT17W131 *STABILIT AND CON*  * ICS UTILIZING AN *  * TROL(7)CONTROL SU*  * OS-SCALE HI-FIDE*  * TRACE HINGE MOMEN*  * LITY REMOTE  * TS(3)REYNOLDS  * *  * CONTROL, MODEL (39*  * HUMBER EFFECTS(4)*  * ESEARCH CENTRE UN*  * HYSTERESIS AND CO*  * *  * ESEARCH CENTRE UN*  * HYSTERESIS AND CO*  * *  * ESEARCH CENTRE UN*  * HYSTERESIS AND CO*  * *  * *  * CONTROL, MODEL *  * ERACTIONS(5)  * *  * OUTBOARD ELEVON I*  * *  * *  * *  * *  * *  * *  * *															L SPACE DIVI	SI*DFC	, 1980
*ICS UTILIZING AN * *TROL(?)CONTROL SUP * * *-DMS											*					*	
**OB-SCALE HI-FIDE*	151,					F15VT16VT17W131					*					*	
**LITY REMOTE											*	*		* - DM	S	*	
**CONTROL MODEL (39* *NUMBÉR EFFECTS(4)* *					_						*	*		*		*	
+-0) IN THE AMES R*											*	*		*		*	
*ESÉARCH CÉNTER UN* *1TARY WIND TUNNEL* *ERACTIONS(5) * *(0A145A * *PROPOSED INBOARD/* * **OUTBOARD ELEVON I* * ** ** ** ** ** ** ** ** ** ** ** **					_				- • •		*	*		*		*	
*ITARY WIND TUNNEL*									_		*	*		*		*	
*(0A145A * * *PROPOSED INBOARD/* * * * * * * * * * * * * * * * * * *											*	*		*		*	
* * * * * * * * * * * * * * * * * * *				ID TUNNEI	*						*	*	t	*		*	
* * * * * * * * * * * * * * * * * * *		*	(OA 145A		*						*	*	I	*		*	
* * * * * * * * * * * * * * * * * * *		*			*						*	*	•	*		*	
* * * * * * * * * * * * * * * * * * *		*			*		*NTER	ACTION MA	TH M+		*	*	:	*		*	
- *RESULTS OF AN INV+B75C16E64F16FD3FR*VERIFY ORBITER VE*FORCE		*			*		*ODEL	•	*		*	*	•	*		*	
### - *ESTIGATION TO VER*22HG1M52N108N109N*HICLE 102 AERODYN*PRESSURE *1.4		*			*		*		*		*	*	•	*		*	
-1		<b> *</b>	RESULTS C	F AN IN	/+B	75C16E64F16FD3F1	R*VERI	FY ORBITE	R VE*	FORCE	*0.6	- +	ROCKWELL/	*R	H. MULFINGER	/R*DMS-	DR-2380
## ## ## ## ## ## ## ## ## ## ## ## ##	WT	- *1	ESTIGATIO	N TO VER	۲ <b>+2</b> :	2HG1M52N108N109I	<b>√+HICL</b>	.E 102 AER	UDYN≁	PRESSURE	*1.4						
## 151,803+AERD CHARACTERIST*VT15VT16VT17W131 *STABILITY AND CON*	- 1	/*:	IFY SHUTT	LE ORBIT	*1	ION 1 1 1R20V27VT 10	O+AMIC	CHAR WIT	H RE*		*				L SPACE DIVI	SI*DEC	, 1986
*ICS UTILIZING AN *	45A	*	ER VEHICL	E 102	*V1	T11VT12VT13VT14	*GARD	TO (1)B.	<b>ASIC</b> *		*					*	
* O5-SCALE HI-FIDE*  *RFACE HINGE MOMEN*  *LITY REMOTE	151,	803*	AERO CHAR	ACTERIST	*V	15VT16VT17W131	*STAE	ILITY AND	CON*		*	*	·L (UNITARY)	*M.	M MANN	*	
*LITY REMOTE		*	ICS UTILI	ZING AN	*		*TROL	(2)CONTRO	L SU*		*	*	t .	*-DN	15	*	
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *		*	05-SCALE	HI-FIDE	*		*RFAC	E HINGE M	OMEN*		*	*	•	*		*	~
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *		*	LITY REMO	ITE	*		*TS(3	)REYNOLDS	*		*	*	•	*		*	₩:
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *		*	CONTROL M	IODEL (39	<b>3</b> *		*NUME	ER EFFECT	s(4)*		*	*	ŧ	*		*	- 0 6
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *		*	-0) IN TH	IE AMES I	2*		*HYS1	ERESIS AN	D CO+		*	*	:	*		*	<u>י</u>
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *		*	ESEARCH C	ENTER U	1*		*NTRC	L SURFACE	INT*		*	k	<b>K</b>	*		*	9
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *											*	*	•	*		*	ည္
* * *OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *					*				ARD/*		*	*	•	*		*	ا (نہ
* * *NTERACTION MATH M* * * * * * * * * * * * * * * * * * *		*			*						*	k	•	*		*	Ο.
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and the contract of the contra		s <b>k</b> c			*		*	•	xk:		*	•	•	*		*	<u> </u>
							•		-			•					7

	WIND TUNNEL TO	EST / DMS DATA PRO	CESSING		287
1 = 4 :	* GURATIONS * TEST ESTED * PURPOSE	* TYPE OF *	DDEL * SCALE* TESTING ACH RANGE* AGENCY	* TEST DMS *	BASIC PUBLICATIONS OR COMMENTS
ARC - *RESULTS OF AN INV*B75C16E  11TWT - *ESTIGATION TO VER*22HG1M5  11B-1	54F16FD3FR*VERIFY ORBITION 2N108N109N*HICLE 102 AEI R2OV27VT10*AMIC CHAR WI 2VT13VT14 *GARD TD (1)I SVT17W131 *STABILITY ANI *TROL(2)CONTRI *RFACE HINGE I *TS(3)REYNOLD: *NUMBER EFFEC *HYSTERESIS AI *NTROL SURFACI *ERACTIONS(5) *PROPOSED INBI *OUTBOARD ELE *NTERACTION M. *ODEL ** 2VT10**ANIC CHAR WI 2VT13VT14 *GARD TO (1)I	RODYN*PRESSURE *1 TH RE*  BASIC* D CON* OL SU* MOMEN* S * * TS(4)* ND CO* E INT* VON I* ATH M*  ER VE*FORCE *0 RODYN*PRESSURE *1 TH RE* BASIC* D CON* OL SU* * * * * * * * * * * * * * * * * * *	4 +ARC -  *11-FOOT TRANSO  *NIC WIND TUNNE  *L (UNITARY)  *  *  *  *  *  *  *  *  *  *  *  *  *	*M M MANN * *-DMS *  *  *  *  *  *  *  *  *  *  *  *  *	VOLUME 04 DEC., 1980 DMS-DR-2380 VOLUME 05
*ITARY WIND TUNNEL* *(OA145A * * *	+ERACTIONS(5) *PROPOSED INB *OUTBOARD ELE *NTERACTION M	OARD/* * VON I* *	* * *	* * *	PAGE PAGE

11WT - *ESTIGATION TO VER*22HGIMSZN1OBN1O9N+HICLE 102 ÅERDDYNI+PRESSURE * 1 4 **ARC								WIND	TUNNEL	TEST	/ 1	DMS DATA	PROCE	SSING							288
TESTED   * PURPOSE   TEST * *** *** *** *** *** *** *** *** ***			 *		*			*			*		*MODE	 L	*		*	COG	NIZANT	* BASI	C
RC - *RESULTS OF AN INV*B75C1GEG4F1GFD3FR*VERIFY ORBITER VE*FORCE * 0 6 - *ROCKWELL/ *R H. MULFINGER/R*DMS-DR-2380 18-1 /*IFV SHUTTLE ORBIT+110N111R20V27VT10*AMTC CHAR WITH RE* * *ARC - *OCKWELL INTERNATI*VOLUME OF *ALFAC LO2 *VT11VT12VT13VT14VT14 SQAD TO (1)BASIC* *NIC WIND TUNNE*ON *LITY RENDATI*VOLUME OF *ALFAC LO2 *VT11VT12VT13VT14VT14VT13VT14VT14VT14VT14VT14VT14VT14VT14VT14VT14	TEST		*		*	CONFIGU	RATIONS	*	TES	r	*	TYPE OF	*	SCALE	+ TEST	TING	*				
11WT - *ESTIGATION TO VER*22HGIMSZN1OBN1O9N+HICLE 102 ÅERDDYNI+PRESSURE * 1 4 **ARC	ID		* REPO	RT TIT	'LE *	TES	TED	*	PURPO	SE	*	TEST	*MACH	RANGE	* AGE	VCY	*	PER	SONNEL	*OR COMM	IENTS
11WT - *ESTIGATION TO VER*22HGIMSZN1OBN1O9N+HICLE 102 ÅERDDYNI+PRESSURE * 1 4 **ARC																				. <b></b>	
18-1	ARC															ELL/					
A145A												RESSURE	-			- T TDAI					
R-151,806+ÅEROC CHARACTERIST*VT15VT16VT17V13																			HOE DIVIS	*	1500
** *** *******************************													*						ANN	*	
* OS-SCALE HI-FIDE*	J					** *** ***							*		•	,				*	
*LITY REMOTE													*		*		-			*	
**O) IN THE AMES R*  **ESEARCH CENTER UN*  **ITARY WIND TUNNEL*  **COMA145A  *													*		*		*			*	
*ESÉARCH CENTER UN+ *NTROL SURFACE INT* * * * * * * * * * * * * * * * * * *			*CONTRO	L MODE	L (39+			*NUM	BÉR EFF	ECTS(4	;)*		*		*		*			*	
*ITARY WIND TUNNEL*			*-0) IN	THE A	MES R*			*HYS	TERESIS	AND C	÷0		*		*		*			*	
+(0A145A			+ESÉARC	H CENT	ER UN+			*NTR	OL SURF	ACE IN	<b>≬</b> T *		*		*		*			*	
* + OUTBOARD ELEVON I* * * * * * * * * * * * * * * * * * *			*ITARY	WIND T	*UNNEL			*ERA	CTIONS(	5)	*		+		*		*			*	
* * * * * * * * * * * * * * * * * * *			+(OA145	A	*			*PRO	POSED I	NBOARD	)/*		*		*		*			*	
* * * * * * * * * * * * * * * * * * *			*		*			+OUT	BOARD E	LEVON	I *		*		*		*			*	
# # # # # # # # # # # # # # # # # # #			*		*			*NTE	RACTION	MATH	M*		*		*		*			*	
ARC -*			*		*			+ODE	L		4		*		*		*			*	
## PTEMBER 1978 * PTEMBER 1978 * * * * * * * * * * * * * * * * * * *			*		*						*		*		*		*			*	
## ## ## ## ## ## ## ## ## ## ## ## ##	LARC	-	*						-		SE*F	ORCE	*			٠ /		_	CDONALD		
## ## ## ## ## ## ## ## ## ## ## ## ##			+		* 5	PTEMBER 1	978	*PTE	MBER 19	78	*		*			<b>-</b>	_	MS		*JUNE,	198
* * * * * * * * * * * * * * * * * * *		•			+			*			* .		*							*	
*	_A 107				*			*			*		*			ESSURE	1U*			*	
### SECOND STAGE ASC * *** *** *** *** *** *** *** *** ***			*		*			*			*		*		· · · · · · · · · · · · · · · · · · ·		*			**	
PBF - *MENTAL TESTS IN T+2A AFT OF STA XO*STAGE ASCENT BASE*			*		*		- (	*	~====		*		*			,	**		ADTON/DI	******	กกดก
27												EAT-IRAN		•		/					
### #LSE BASE FLOW FAC*IMULATION SYS.) *D PRESSURE DISTRI*													ж -					_		*NUV.,	131
A109 *ILITY ON A SPACE *		•											ж т						USER OR	*	
## ACREST CONTROL OF SCALE * ** FROM ENGINE PLUM * * * * * * * * * * * * * * * * * * *						IMOLATION	313.)						*				U₩ *-L	4413		*	
*ORBITER (MODEL 2 *													*				*			*	
*5-0) TO DETERMINE*	UK - 151,												*				*			*	
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		WIND TUNNEL TEST	r/ DMS D	ATA PROCESSI	NG		289
	*	*	*	+MODEL	*	* COGNIZANT	* BASIC
TEST *	+ CONFIGURATION	S * TEST	+ TYPE		ALE* TESTING	* TEST DMS	*PUBLICATIONS
ID * REPORT TITLE		* PURPOSE	* TES		NGE* AGENCY	* PERSONNEL	*OR COMMENTS
TD - KCFOKY TITEC							
	JE*0V102 + ET (MOD				/ *ROCKWELL/	*J J.DAILEDA +	
B - *T PLUME INTERA	CTI*70-0T)	*TION EFFECTS OF		*5.89	*AEDC -	*ARROQUIN/RI	*VOLUME O1
/∗ON TESTS USING	A *	*CS THRUSTER JET		*		WIN+U E VAUGHN	*SEPT , 1978
48 *O.0125~SCALE M		*LUMES ON SSV A		*	*D TUNNEL (	B) *-DMS	*
151,412*L (70-OT) OF T	HE *	*DYNAMICS DURING *TAGING TO SIMUL	3 S*	*	*	*	*
*SPACE SHUTTLE	VEH*	*TAGING TO SIMUL	_AT*	*	*	*	*
*ICLE ORBITER I	N T≁	*E A RETURN-TO-L	_AU*	*	*	*	*
*HE AEDC VKF TU	NNE+	*NCH SITE (RTLS)	) A*	*	*	*	*
*L %B% (IA148)	*	*BORT MISSION	*	*	*	+	*
*	+	*	*	*	*	*	*
C - *RESULTS OF RCS	JE+0V102 + ET (MOD	EL*TO OBTAIN INTER	RAC*FORCE	<b>*0 0125</b>	/ *ROCKWELL/	*J J DAILEDA +	J.M*DMS-DR-2384
B - *T PLUME INTERA		*TION EFFECTS OF		<b>*5 89</b>	*AEDC -	*ARROQUIN/RI	<b>⊁VOLUME O2</b>
/+ON TESTS USING	•	*CS THRUSTER JET	r P*	*	*HYPERSONIC	WIN*J. E VAUGHN	*SEPT , 1978
48 *O 0125-SCALE M		*LUMES ON SSV A	RO+	*	*D TUNNEL (I	B) *-DMS	*
151,413+L (70-OT) OF T		*DYNAMICS DURING		*	*	*	*
*SPACE SHUTTLE		*TAGING TO SIMUL		*	*	*	*
*ICLE ORBITER I		*E A RETURN-TO-		*	*	*	*
*HE AEDC VKF TU		*NCH SITE (RTLS)		*	*	*	*
*L %8% (IA148)	*	*BORT MISSION	*	•	*	*	*
*L %5% (14146)	4	*BOK1 M1331014			*	*	*
*DECULTS OF TES	TS *MODEL 53-0 (ELE	VOTTO EVALUATE EER	ECTUEAT-T	111 O*2MAG	/ *ROCKWELL/	*C. L BERTHOLD	/RI*DMS-DR-2385
		*T OF ELEVON DEF		*5.1 -		*D W.HERSEY	*SEPT . 1977
HWT - *ON A 0.111-SCA	LE *N/WING GAP)	*CTION. GAP GEON		*5.1		YPER+M M. MOSER JR	*
/*SPACE SHUTTLE				<b>⊕</b> Θ	*SONIC WIND		*
5 *HICLE SIMULATE		*RY, AND BOUNDAR		*	*NEL	1014-0143	•
151,366+LEVON/WING GAP		*LAYER STATE ON		*	*146 L		*
*AT TRANSFER MO		*EVON/WING GAP H	HEAT	*	<b>*</b>	*	* * * * * *
*(53-0) IN THE	AM ↑	*TING	*	*	*	*	<del>ه</del> ان
*ES RESEARCH CE		*	*	*	*	*	*
*R 3 5-F00T HWT	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*
- *RESULTS OF TES	TS *MODEL 53-0 (ELE	VO+TO EVALUATE EFF	FEC*HEAT-T	RANS+0 111	/ *ROCKWELL/		/RI*DMS-DR-2386 *SEPT , 1977
HWT - +ON A O 111-SCA	LE *N/ELEVON GAP)			*5.1 <i>-</i>	*ARC	+D W HERSEY	*SEP1 , 1977
/*SPACE SHUTTLE	VEH+	*CTION, GAP GEOM		<b>*</b> 5 1		YPER*M. M MOSER JR	*
4 *ICLE SIMULATED		*RY, AND BOUNDAR	₹ *	*	*SONIC WIND	TUN*-DMS	*
151.368*EVON/ELEVON GA		*	*	*	*NEL	*	*
*EAT TRANSFER M		*	*	*	*	*	*
*L (53-0) IN TH		*	*	*	*	*	*
*MES RESEARCH C		*	*	*	*	*	*
*MES RESEARCH C		*	*	*	*	*	*
*SONIC WIND TUN		*	*	*	*	*	*
KSINTIC WINTER LUN	INC L *	~		•	•		

<b>*</b>				WIND	TUNNEL TEST	/	DMS DATA	PROCES	SSING					290
*		*		*		<i>-</i>		*MODEI	 		*	COGNIZANT	* BA	 SIC
TEST *		*	CONFIGURATIONS	*	TEST	*	TYPE OF		_	* TESTING	*		*PUBLI	
ID *	REPORT TIT	`LE *	TESTED	*	PURPOSE	*	TEST	*MACH		+ AGENCY	*	PERSONNEL	*OR CO	
ARC - *		<b></b>	FCT CANCELLED OF											
TPT - *		7 ( ) 407	EST CANCELLED SE TEMBER 1978		CANCELLED: BER 1978		ORCE	*		*LARC /		W. BALL	*DMS-DI	R-2387
46 /*		*	TEMBER 1976	*PICM	BEK 19/8	*		*		*LARC -		G. MCDONALC	*TASK	
1104 *		*		*		*		*		*LOW-TURBULEN( *PRESSURE TUN	-	MS	*CANCE	
*		*		*		*		*		*FRESSURE TUNI *EL			*SEPT	, 197
*		*		*		*		*		*	*		* *	
₹C - +	RESULTS OF A	N INV*B	75C16E64F16FD3FR	R*VERI	FY ORBITER Y	VE*F	DRCE	*2 45		*ROCKWELL/	*₽	H. MULFINGER	/P*DMS-D	D-2280
75WT - *	ESTIGATION 1	O VER+2:	2HG 1M52N 108N 109N	N*HICL	E 102 AEROD	/N*P	RESSURE	*3 5		*ARC -		KWELL INTERNAT		
18-1 /*	IFY SHUTTLE	ORBIT*1	10N 1 1 1R20V27VT 10	*AMIC	CHAR WITH I	RE+		*		+8-FOOT BY 7-F		AL SPACE DIVIS		
1145C *	ER VEHICLE 1	102 *V1	T11VT12VT13VT14	*GARD	TO: (1)BAS	EC*		*		*OT SUPERSONIC			*	,,,,
			T15VT16VT17W131	*STAB	ILITY AND CO	`*NC		*		*WIND TUNNEL (	U*M.	M. MANN	*	
	ICS UTILIZIN				(2)CONTROL S			*		*NITARY)	* - DI	MS	*	
	O5-SCALE HI				E HINGE MOMI	EN+		*		*	*		*	
	LITY REMOTE	*			)REYNOLDS	*		*		*	*		* "	
	CONTROL MODE				ER EFFECTS(4			*		*	*		*	
	-O) IN THE A				ERESIS AND			*		*	*		*	
	ESEARCH CENT ITARY WIND T				L SURFACE IN	4.1h		*		*	*		*	
	(OA145C)	PININE C*			TIONS(5) OSED INBOARD	* *		*		*	*		*	
*	(041430)	*			ON INTERACT:	_		*		<b>*</b>	*		*	
*		*			TH MODEL	.u.		<b>1</b>		* •	- A-		* 	
*		*		*	III MOULE	*		•		*	* •		*	
!C - *	RESULTS OF A	N INV*R	75C16E64F16FD3FR		FY OPRITED V	/F*F	UDCE	*2.45	_	* *ROCKWELL/	*0	H. MULFINGER	/D+DMC_DI	0-000
SWT - *1	ESTIGATION T	O VER*22	2HG1M52N108N109N	I*HTCL	F 102 AFRODY	/N*P	RESSURE	*3 F		+ARC -		KWELL INTERNAT		
8-1 /*	IFY SHUTTLE	ORBIT*1:	10N111R20V27VT10	*AMIC	CHAR WITH F	₹E+	NEDSONE	*				AL SPACE DIVIS		
145C *	ER VEHICLE 1	02 +V1	[11VT12VT13VT14	*GARD	TO (1)BASI	[C*		*		*OT SUPERSONIC			*	, , ,
-160,811*	AERO CHARACT	ERIST*V1	T15VT16VT17W131	*STAB	ILITY AND CO	*NC		*		*WIND TUNNEL			*	
*	ICS UTILIZIN	IG AN ∗		*TROL	(2)CONTROL S	\$U*		*		*NITARY)	*-pi		*	
	05-SCALE HI	-FIDE*		+RFAC	E HINGE MOME	N*		*		*	*		*	
	LITY REMOTE	*		*TS(3	)REYNOLDS	*		*		*	*		*	
	CONTROL MODE	_ ,			ER EFFECTS(4			*		*	*		*	00
	O) IN THE A				ERESIS AND (			*	;	*	*		*	71 2
	ESEARCH CENT				L SURFACE IN	IT*		*		*	*		*	73 (
	ITARY WIND T	ONNEL*			TIONS(5)	*		*		*	*		*	Ö
*	(OA145C)	*			DSED INBOARD	_		*		*	*		*	Ōŝ
*		¥* .ı.			ON INTERACT			*	1	*	*		*	OF POOR
* •		**		*N MA	TH MODEL .	*		*	,	*	*		*	
*		*		*	·	*		*	•	*	*		*	QUALIT
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		WIND TUNNEL TEST	/ DMS DATA	PROCESSING		29
·	*	*	*	*MODEL *	* COGNIZANT	* BASIC
TEST *	CONFIGURATI	ONS * TEST	* TYPE OF		TESTING * TEST DMS	*PUBLICATION
ID * REPORT TITL		* PURPOSE	* TEST	*MACH RANGE*	AGENCY * PERSONNEL	*OR COMMENTS
RC - *RESULTS OF AN 7SWT - *ESTIGATION TO 18-1 /*IFY SHUTTLE O 1445C *ER VEHICLE 10 R-160,812*AERD CHARACTE *ICS UTILIZING * O5-SCALE HI- *LITY REMOTE *CONTROL MODEL *-O) IN THE AM *ESEARCH CENTE *ITARY WIND TU *(OA145C) * * ARC - *LOW SUPERSONI PWT - *ABILITY AND C	INV*B75C16E64F16F VER*22HG1M52N108N RBIT*110N111R20V27 2 *VT11VT12VT13V RIST*VT15VT16VT17W AN * FIDE*  (39* ES R* R UN* NNEL*  * * * * * * * * * * * * * * * * * *	D3FR*VERIFY ORBITER HO9N*HICLE 102 AEROD VT10*AMIC CHAR WITH VT14 *GARD TO: (1)BAS	VE+FORCE DYN+PRESSURE RE* SIC* SIC* SIC* SIC* A)* CO* ANT* * * * * * * * * * * * * * * * * * *	*2 45 - * *3 5 *  * * * * * * * * * * * * * * * * *	ROCKWELL/ *R H MULFINGEF ARC - *OCKWELL INTERN/ 8-FOOT BY 7-FO*ONAL SPACE DIVI OT SUPERSONIC *ON WIND TUNNEL (U*M. M. MANN NITARY) *-DMS  * * * * * * * * * * * * * * * * * *	R/R*DMS-DR-2389 TI*VOLUME O3 TI*VOLUME O3 * * * * * * * * * * * * * * * * * * *
*	*	*OBTAIN OTHER CO		* *	* *	* 60 5
τ ••	*	*ROL SURFACE DAT		* *	*	* = 2
*	* *	*	*	* *	*	QUALITY  * * *

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	,	* '	<del></del> -	*		*		*		*MODEL		*	*		COGNIZANT	*	BASI	c
TEST	ŗ,	k		* C	ONFIGURATIONS	*	TEST	*	TYPE OF		_	* TESTI	NG *		EST DMS		JBLICA	-
ID		* REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST			* AGENC			PERSONNEL		COMM	
ARC					- SINGLE STI	–			DRCE	* 0 01		*ROCKWEL	•		HAWTHORNE,			
TPT							TEST WAS TO			*0.6		*LARC			NGLER /RI		ARCH,	1982
79	/*	SPACE SH	UTTLE IN	*OTS	- ET AND SRB	*0BT#	IN ORBITER/E1	r*		*1.195	5				IA C. FREEMAI	N *		
A244					SEPERATE STIN					*		*IC PRES	SURE TU*	/LAR	C.	*		
R-167,					- ATTACH STR					*		*NNEL	*	D W	HERSEY	*		
	4	SEARCH C	ENTER 8-1	*CTU	RE ON TANK ON	L*ERMI	NE THE EFFECT	ŗ*		*		*	*	G W	. KLUG	*		
			SONIC PRE			*QF F	EYNOLOS NUMB	*		*		*	*	-DMS	•	*		
	×	SSURE TU	NNEL, MOI	<b>)</b> *		*ER 0	N ELEVON HING	<b>3</b> *		*		*	*			*		
	*	EL 72-0T	S TEST I	*		*E MC	MENTS	*		*		*	*			*		
	k	×244		*		*		*		*		*	*			*		
	×	k		*		*		*		*		*	*			*		
IRLAD	- 4	GROUND P	ROXIMITY	+MOD	EL 45-0 ORB,	1*TO D	EFINE ORB. LA	*F(	DRCE	+0 03	/	*ROCKWEL	L/ *	R M	ENNELL/RI	*DN	IS-DR-	2392
.SWT					/B CONF. (MOD					* .20	)-	*NRLAD			VAUGHN		EC .	1977
75	/*	-SCALE M	ODEL (45-	*FIE	D)	*ITY	CHARACTERISTI	[*		* 20					MOSER JR.		•,	
A250	*	O) SPACE	SHUTTLE	*		*CS I	N GROUND PROX	<b>(</b> *		*		*TUNNEL		-DMS		*		
R-151,	389	ORBITER	IN THE RO	*		*IMIT	Y TO INVEST	<b>*</b>		*		*	*			*		
	×	CKWELL I	NTERNATIO	*			DISCREPANCIE			*		*	*			*		
	k	NAL NAAL	LOW SPEE	*			LAT -DIRECT.			*		*	*			*		
		D WIND T		*			OBTAINED IN			*		*	*			*		
	k	k	• – –	*			R NAAL TESTS			*		*	*			*		
	×	r		*		*	IN NAME IEUTO	ak		*		*	*			*		
.ARC	*	EFFECT O	F SILTS	*MOD	EL 44-0 (SILT	S*TO D	FTERMINE FEFE	* 1	nece	*0.015	. /	+LARC	/ *	G W	ARE. B SPE	NC*EN	us-bR-	2395
TPT			E TRANSON				F AERO. CHARA		31100	*0.6		+LARC			JR /RI		AN .	1978
86			YNAMIC CH		•		ISTICS OF ORE			*1 20					MCDONALD	*	,,	1575
A111	•		STICS OF	•			RESULTING FR			*		*IC PRES				*		
			SCALE SHI				DDITION OF S			*		*NNEL	JONE 10*	U1110		*		
, . , ,			ITER MODE				POD TO VERTIC			*		* 14145.	- -			*		
			TESTED I	_		*AL T		. T					- T					
			SA/LARC 8			TAL I	71 L	T		T.		~ •				- T		
		FOOT TP	- •	y t'		<i>~</i> •		Ţ		~ •			*			Ψ.		
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			WIND TUNNEL	TEST / DMS DA	TA PROCESSING			293	
TEST	*	* + CONFIGURA	* TIONS * / TEST	* * TYPE :		TESTING *	COGNIZANT TEST DMS	* BASIC *PUBLICATIONS	
ID	* REPORT TIT	LE * TESTE	D * PURPOS	E, * TEST	*MACH RANGE*	AGENCY *	PERSONNEL	*OR COMMENTS	
								10. DUD DD 0000	
LARC	- *EFFECT OF SI	LTS P*MODEL 44-0	(SILTS*TO DETERMIN	E EFFE*FORCE	*0 015 / *		G WARE, B. SPEI		
UPWT	- *OD ON THE LO	IW SUP*POD) IDYNAM+	*CT OF AERO				ER, JR /LARC	*DEC., 1977	
1212	/*ERSONIC AERO	DYNAM+	*CTERISTICS	OF ORB*		UNITARY PLAN W*		*	
LA 110	*IC CHARACTER	!ISTIC*	*ITER RESULT	ING FR*	*	IND TUNNEL *	-DMS	*	
CR-151.3	393*S OF A 0.015	-SCAL*	*OM ADDITION	OF SI*	* *	*		*	
	*E SHUTTLE OF		*LTS POD TO	VERTIC*	* *	*		*	
	+MODEL (44-0)		*AL TAIL	*	* *	*		*	
	*TED IN THE N		*	*	* *	*		*	
	*ARC 4-FOOT U		*	*	* *	*		*	
		/FWI (*			* *	*		*	
	*LEG 1)	*	±.			*		*	
	*	*	/n	OF THEFORE	*0 ₋ 01 / *	LARC / *	DELMA C FREEMAI	v *DMS-DR-2397	
LARC			/R *THE PURPOSE		• • • • • • • • • • • • • • • • • • • •		W I SCALLION /		
8TPT			VEHIC*IS TEST WAS		_	<b>—</b>		- *APRIC, 1902	
780	/*0.010 SCALE	MODEL*LE 5	*RIFY RESULT			8-FOOT TRANSON*		*	OF POOR
LA113	*(72-0TS) ROC	KWEL *S -MODIFIED	VEHIC*ARLIER TEST	5 (IA2*		IC PRESSURE TU*		*	~11 <u>~</u>
CR-167.3	347*L SPACE SHUT	TLE V+LE 5	*44) OF THE			· · · · <del></del> -	G W KLUG	*	უგ 🖸
	*EHICLE IN Th	IE LAR∗	*MODEL IN TH	E SAM *	* *	*	-DMS	*	ÕΞ
	*C 8-FOOT TRA		<b>∗E TUNNEL</b>	*	* *	*		*	ŎĔ
	*C PRESSURE T	UNNEL+	*	*	* *	*		*	χīf
	*(LA113)	*	*	*	* *	*		*	
	*	*	*	*	* +	*		*	O J
AEDC	- +DECINITE OF T	TESTS *BEOCOFEAW13	1M16N2*TO OBTAIN A	FRODYN*FORCE	*0 03 / *	ROCKWELL/ *	R H SPANGLER/RI	*DMS-DR-2398	ALITARD
	# # # # # # # # # # # # # # # # # # #	CCAL +0N440DEVOED	3F9 *AMIC LOADS	ON ALL *DDFSSIID			L P LEBLANC/RI	*VOLUME 01	Messa (). ∑(20 (∑
			*VEHICLE ELE		*155 +	TRANSONIC PROP*		*NOV , 1981	<u>-</u> , "
470	/*E MODEL (47-					ULSION WIND TU*		*	- J
IA 105A	*OF THE SPACE		*BY PRESSURE			NNEL (PWT-16T)*		*	
CR-160,8	850*TLE INTEGRAT		*GRATION AND			MACE (PAI-101)"	-0143		
	*HICLE IN THE		*RE LOADS DI		* *	*		4.	
	*16 FOOT TRAN	=	*ON WING VER		* *	**************************************		*	
	*C PROPULSION	I WIND+	*TAIL AND EL		* *	*		*	
	*TUNNEL (IA10	)5A) *	*HINGE MOMEN	TS *	* *	*		*	
	*	*	*	*	* *	*		*	
AEDC	- *RESULTS OF T	ESTS *B62C9E64W13	1M16N2*TO OBTAIN A	ERODYN*FORCE	*0 03 / *		R.H.SPANGLER/RI		
	- *USING A O OS	SCAL*8N112R5V8FD	3F9 *AMIC LOADS	ON ALL*PRESSUR	*06 - *		L P LEBLANC/RI	<b>≁VOLUME O2</b>	
470	/*E MODEL (47-		+VEHICLE ELE		*1 55 *	TRANSONIC PROP*	S R HOULIHAN	*NOV , 1981	
IA105A	*OF THE SPACE		*BY PRESSURE		* *	ULSION WIND TU*	G W KLUG	*	
	*OF THE SPACE 851*TLE INTEGRAT		+GRATION AND			NNEL (PWT-16T)+		*	
CK-100,8	*HICLE.IN THE		+RE LOADS DI		* +	*		*	
			*ON WING VER			*		*	
	*16 FOOT TRAN				, , , , , , , , , , , , , , , , , , ,	. <u>.</u>		*	
	*C PROPULSION	_	*TAIL AND EL			·		*	
	*TUNNEL (IA10	<b>/5</b> Α / *	*HINGE MOMEN	13. *	· T	7		•	
		•	*		ala de			*	

		. =		·					WIND	TUNNEL T	EST /	DI	MS DA	TA P	ROCES	SING	<b>.</b>						294
		*				*			*			*		*	MODEL		*		*	COGNIZANT		BASI	
TEST ID		*	BEDOE		T	*	COV	IFIGURATION:		TEST			TYPE			SCALI			*	TEST DMS			TIONS
			REPOR			*	~	TESTED	*	PURPOSE	. – – – –	*	TEST	* 	MACH	RANG	 	AGENCY	*	PERSONNEL	*U* 	CDMN	HENIS
EDC	-	*RE	SULTS	OF 1	TESTS	*B	62C9	E64W131M16I	12∗TO (	DBTAIN AE	RODYN	*FO	RCE	*	0 03	/	*R	OCKWELL/	*R	H.SPANGLER/RI	*DM	IS-DR-	-2398
								R5V8FD3F9	*AMI	C LOADS C	N ALL	*PRI	ESSUR	E *	0.6	- '	* A	EDC -		P LEBLANC/RI		LUME	03
70					-DTS)				*VEH	ICLE ELEN	IENTS	*		*	1 55		*T	RANSONIC PRO	P*S	R HOULIHAN	*N0	٧,	1981
A 105A					E SHUT		27		*BY	PRESSURE	INTE	*		*			*บ	LSION WIND T	U*G	W. KLUG	*		
R-160,									*GRA	TION AND	MEASU	*		*			*N	NEL (PWT-16T	)*-0	MS	*		
					E AEDO					LOADS DIF				*			*		*		*		
					NSONI					WING VERT				*			*		*		*		
					N MIND					L AND ELE		*		*			*		*		*		
		*TU	INNEL	(IA16	05A)	*			*HIN	GE MOMENT	'S	*		*			*		*		*		
		*				*			*			*		*			*		*		*		
ARC								. 44-0 (SIL					RCE		0 015		_	ARC /		. WARE, B. SPEN			
PWT					IGH SU		) ( UU			OF AERO.					3 0	-		ARC -		R, JR./LARC		V.,	197
217					RODYNA					RISTICS C					4 63					. G. MCDONALD	*		
4114					ERISTI					R RESULTI				*			* [	ND TUNNEL	**[	OMS	*		
R-151,										ADDITION				*			*		*		*		
					ORBITE				_	POD TO V	ERITO	*		*			*		*		*		
					-O) TE Nasa/				*AL	, AIL		*		*			*		*		*		
					UPWT				*	•		Ψ.		*			*		*		*		
			EG 2)		UPWI	*			*			* 		*			**		**		* 		
		1,6	.CG 2,	,		<u>.</u>			<b>7</b> ₹			47 J.		*			<b>7</b> 7		*		* 		
RÇ	_	*05	CHI TO	. OE 6	cev on	1 <del>1</del> DI	DD T T	ER VEHICLE	140DT	A TNL .CAL TE		*	205	*	0 10	,	7 D	OCKWELL/	*	LOVELL/LERC	45/84	rc DD -	-2400
DSWT								REBODY		DF O 1 AN			KUE		0.4			ERC ~		R BURROWS/RI		יאט־פֿו ד	
12					ATION		2 FU	KEBUDI		ALE ROSEN					2.7	-	_			B. MEINDERS	* 00		190
234					THE O.					DATA SYS					2,1			UPERSONIC WI					
					BITER					ES:MEASUR				- T			_	TUNNEL	. 14 m = 1	Civic	*		6
,					DEL 99					DY FLUSH				*			*	, TOTALL	*		*		9
					ASA/LE					TAP PRESS				*			*		*		*		EX SET
					-FOOT					RIBUTIONS				*			*		*		*		2
					T DNIW					PORT PRE				*			*		*		*		OF POOR
			NEL (			*			*S			*		*			*		*		*		POOR
		*			•	*			*			*		*			*		*		*		
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	WIND TUNNEL TEST / DMS DATA	PROCESSING	295
· · · · · · · · · · · · · · · · · · ·	*	*MODEL *	* COGNIZANT * BASIC
TEST * * CONFIGURATIONS	* TEST * TYPE OF		* TEST DMS *PUBLICATIONS
ID * REPORT TITLE * TESTED	* PURPOSE * TEST	*MACH RANGE* AGENCY	* PERSONNEL *OR COMMENTS
*********************************			
		an are / appointed /	en i urbbrot o «buc bo 6404
ARC - *AERONOISE TEST RE*11-OTS (ORB, ET,	*TO MEASURE FLUCTU*PRESSURE	*0 040 / *RUCKWELL/ *	*B J HERRERA, C *DMS-DR-2401 *L STEVENS/RI *JAN , 1978
11.97.87- *SULTS USING A 0.0+2 SRB'S)	*ATING PRESSURE (A*	*3 5 *11-FOOT, 9-FOO?	
705-1 /*40-SCALE SPACE SH*	*ERONOISE) ENVIRON*  *MENT ON LAUNCH VE*	+ *T, 8-FOOT, UNI	
IS1A/B/C *UTTLE VEHICLE CON* OS3 *FIGURATION 2A MOD*	*HICLE DURING TRAN*	* +TARY WIND TUNN	
CR-151.395*EL (11-OTS) IN TH*	*SONIC/SUPERSONIC *	* *EL *	*
*E AMES RESEARCH C*	*ASCENT AND ORBITE*	* *	k *
*ENTER UNITARY PLA*	*R DURING SUPERSON*	* *	k *
*N WIND TUNNELS *	*IC ENTRY *	* *	*
* *	* *	* *	*
NRLAD - *SYSTEM CHECKOUT 0*B75C16F64F16FD3F	R*CHECKOUT OF ALL M*FORCE	*O 24 - *ROCKWELL/	R C. MENNELL/ROC*DMS-DR-2402
LSWT - *F THE O 05-SCALE *22HG1M52N108N109		*0.24 +NRLAD -	*KWELL INTERNATION*NOV , 1978
766 /*SPACE SHUTTLE VEH*110N111R20V27VT10	O*ACE AND PRESSURE *	* *LOW SPEED WIND*	
QA223 *ICLE ORBITER 102 *VT11VT12VT13VT14	*SYSTEMS AND *		*D W HERSEY *
CR-151,763+MODEL (39-0) IN T+VT15VT16VT17W131			*M M MANN *
*HE NAAL LOW SPEED*	*RATIONAL STATUS O*	* *	*-DMS
*WIND TUNNEL(OA22 *	*F THE COMPLETE MO*	* *	*
*3) *	*DEL *	* *	*
* *	* *	* * * * * * * * * * * * * * * * * * *	, +J J DAILEDA AND*DMS-DR-2403
AEDC - *RESULTS OF TESTS *B75C16E64F16FR22	H+TO OBTAIN FORCE A*FORCE		J. MARROQUIN/ROC *VOLUME O1
PWT16T - *USING A 0.02-SCAL*G1M52N108N109N11			*KWELL INTERNATION*JAN , 1981
470	I*ALL VEMICLE ELEM *	* +ULSION WIND TU	
IA156A *OF THE SPACE SHUT*10VT11VT14VT17W13 CR-160.515*TLE INTEGRATED VE*1T39S27	*TERNAL TANK. AND *	* *NNEL (PWT-16T)	
*HICLE IN THE AEDC*	*EACH SOLID ROCKET*		*-DMS *
*16-FOOT TRANSONI *	*BOOSTER), WING A *	* *	* * 00
*C PROPULSION WIND*	*ND VERTICAL TAIL *	* *	* * \mathfrak{7}{3}
*TUNNEL (IA 156A) *	*LOAD INDICATORS, *	* *	* * _ ^ ~
* *	*ELEVON AND RUDDER*	* *	* * 7 🖺
*	*HINGE MOMENTS, A *	* *	* * ŏ€
* *	<b>*ND BASE-BODYFLAP *</b>	* *	ORIGINAL OF POOR
*	*PRESSURE DATA *	* *	r ···
* *	*	* * ,	* QUAL
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			<b>≪</b> Ø

						WIND	TUNNEL TES	ST /	DMS DATA	PROCES	SSING						296
	*		*	:		*		*		* MODEL	L	*	*	COGNIZANT	*	BASI	С
TEST	*		*		NFIGURATIONS		TEST		TYPE OF			* TESTING		TEST DMS		BLICA	TIONS
ID	*	REPORT	TITLE *	' <b></b> _	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	. *OR	COMM	IENTS
DC -	- *R	RESULTS D	TESTS *	B75C	16E64F16FR22I	4*TO C	DBTAIN FOR	E A+F	ORCE	+0.3	-	*ROCKWELL/	* J	J DAILEDA	AND*DM	IS-DR-	2403
T16T -	- *Ն	SING A O	02-SCAL*	G1M5	2N108N109N110	A DN+C	MOMENT DATA	*NO		*1 55		*AEDC -	ل∗	MARROQUINA	ROC *VO	LUME	02
0	/+E	MODEL (	89-OTS) *	N111	R20U1V27V29V	Γ*ALL	VEHICLE EL	.EM *		*		*TRANSONIC P	ROP*KW	ELL INTERNA	AL*MOIT	N,	1981
156A	*(	OF THE SP.	ACE SHUT*	TVOI	11VT14VT17W10	3+ENTS	S (ORBITER,	EX*		+		*ULSION WIND	TU*AL		*		
-160,51		LE INTEG			S27		NAL TANK, #			*		*NNEL (PWT-1	6T)*M.	M MANN	*		
		ICLE IN					I SOLID ROO			*		*	* -DI	MS	*		
		6-FOOT T					STER). WING			*		*	*		*		
		PROPULS					/ERTICAL TA			*		*	*		*		
	*1	UNNEL (I	4156A) *				) INDICATOR			*		*	*	·	*		
	*		*				ON AND RUE			*		*	*		*		
	*		*				SE MOMENTS,			*		*	*		*		
	*		*				BASE-BODYFL	AP *		*		*	*		*		
	*		*				SSURE DATA	*		*		*	*		*		
0.0	*		*			*	<b></b>			*		*	*		*		
DC -	- *K	ESULTS OF	· TESTS *	B750	16E64F16FR22F	1*TO C	JETAIN FORC	E A*	FORCE	*0 3		*ROCKWELL/	_	J DAILED			
					2010801090110					*1 55		*AEDC -		MARROQUIN,			
156A	/*5	MUDEL (	39-015) *	1011	R20U1V27V29V1	T*ALL	VEHICLE EL	EM *		*		*TRANSONIC P			TION*JA	in,	1981
	*U	THE SPA	ACE SHUT*	1001	11VT14VT17W13	3*ENT,5	ORBITER,	EX*		*		*ULSION WIND			*		1981
- 160,51		LE INTEGI					NAL TANK, A			*		+NNEL (PWT-1			*		
		ICLE IN					SOLID ROC			*		*	*-D	MS	*		
		6-FOOT TI					STER), WING			*		*	*		*		
		PROPULS: UNNEL (I					ERTICAL TA			*		*	*		*		
	71	DIMMEC (1)	1150A) *				INDICATOR			*		*	*		*		
	*		*				ON AND RUE			*		*	*		*		
	-T		*				SE MOMENTS,			*		*	*		*		
			*				BASE-BODYFL			*		*	*		*		
	- T		# 			*PKES	SSURE DATA	*		*		*	*		*		
c -	_ უ. _ უ. Ի	COLUMN OF	TECTO .	00.0	FC 00 COM F	*		*		*	. ,	*	*		*		
TWT -	- ጥዚ - ቀጠ	ESULIS UI	. 16212 *	88-U	TS- O2 SCALE HE INTEGRATED	*   U   L	PETERMINE I	HE *1	UKCE	* 020		*ROCKWELL/		J. DZIUBALA			
5-1	/41	E NODEL	OZU-5GA*	CDAC	E SHUTTLE VE	372272 4 144 4	CIS OF IME	: MA*1	KESSUKE	*.6		*ARC -		ONE/RI		LUME	•
119	/ *L	F THE SPA	(00-UIS)*	SPACE	E SHUTTLE VE					*1.40		*11-FOOT TRA			1N *UC	ET,	1980
		TLE INTE					(MPS) AND			*		*NIC WIND TU			*		
100,51		HICLE JE					ROCKET BOOS			-t		*L (UNITARY) *	*-D	M2	-		
		N THE NAS				-	3) PLUMES ( (CLE PRESSU			T		<b>₹</b>	- A		*		
		WT 11 X					RIBUTIONS.			т •		<b>↑</b>	<b>∓</b>				
		EC (TEST					BENDING AND			*		·	<i>π</i>				
	*	CO (1231	* 111 M				ON LOADS AN			<b>→</b>		•	•		<b>.</b>		
	*						IN LUAUS AN IN HINGE MO			т ж		т ±	- -		•		
	*		*			*TS.	MA LITINGE MC			T		₩ *	*		*		
			*					•		**		4	T		r		

OF POOR	ORIGINAL
ALITAND	PAGE IS

						WIN	ID TUNNEL	TEST /	[	OMS DATA	PROCES	SING							297
			*			*			*		*MODEL		*		*	C	DGNIZANT	* B	ASIC
rest	*		*	CONF	IGURATION	S *	TEST		*	TYPE OF	*	SCAL	Ε*	TESTING	*	TE	ST DMS	*PUBL	ICATIONS
ID	*	REPORT TITLE	*		TESTED	*	PURPOS	E	*	TEST	*MACH	RANG	E*	AGENCY	*	P	ERSONNEL	*OR C	OMMENTS
_	<b>.</b> Г	ESULTS OF TESTS	400	2-OTC	- 02 5041	F +TC	DETERMIN	F THE	, F.C	nbCE	* .020	. /	*R1	OCKWELL/	*T.	d. 1	L.AJABUISC	*DMS-1	DR-2404
- TV	- 7- (⊀ - 1-1-	ISING A 0.020-SC	, o.o. 10 + 1	THE	TNITECOAL	E 710	EECTS OF	THE MA	* D [	PESSURE	* 6		* A		*ST			*VOLU	
-1	/+1	E MODEL (88-OTS	12 * C	ACE	SHUTTLE V	F * TN	PROPULST	ON SYS	*		*1 40			1-FOOT TRANS	0*S	R	HOULIHAN	*OCT	. 1980
		OF THE SPACE SHU			311011111	* TF	M (MPS) A	ND SOL	*		*			IC WIND TUNN				*	•
		TLE INTEGRATED V					ROCKET B				*			(UNITARY)	*-D	_		*	
.00,51		HICLE JET PLUME					RB) PLUME				*		*		*			*	
		N THE NASA/ARC I					HICLE PRE				*		*		*			*	
		WT 11 X 11-FOOT					STRIBUTIO				*		*		*			*	
		EC (TEST IA119)					BENDING				*		*		*			*	
	*	(1001 27110)	*				ION LOADS				*		*		*			*	
	*		*				VON HINGE				*		*		*			*	
	*		*			*TS			*		*		+		*			*	
	*		*			*			*		*		*		*			*	
-	* F	ESULTS OF TESTS	*88	r-ors	- O2 SCAL	E +T0	DETERMIN	E THE	*FC	DRCE	* 020	/	*R	OCKWELL/	*Τ	J. I	DZIUBALA,J	*DMS-I	DR-2404
- ты	*1	SING A 0.020-SC	1.40	THE	INTEGRAT	ED*EF	FECTS OF	THE MA	*PI	RESSURE	* 6	-	*A	RC -	*ST	ONE,	/RI	*VDLU	
-1 /	/*1	E MODEL (88-DTS	) +SI	PACE	SHUTTLE V	E +IN	PROPULSI	ON SYS	*		*1 40		* 1	1-FOOT TRANS	D*S	R.	HOULIHAN	*OCT.	, 1980
		F THE SPACE SHU			J	*TE	M (MPS) A	ND SOL	*		*		*N	IC WIND TUNN	E*B.	J	BURST	*	
		TLE INTEGRATED					ROCKET B				*		+L	(UNITARY)	*-D	MS		*	
,00,0		HICLE JET PLUME					RB) PLUME				*		*		*			*	
		N THE NASA/ARC U				, -	HICLE PRE				*		*		*			*	
		WT 11 X 11-FOOT					STRIBUTIO				*		*		*			*	
	_	EC (TEST IA119)					BENDING	-			*		*		*			*	
	*	,	*				ION LOADS				*		*		*			*	
	*		*				VON HINGE				*		+		*			*	
	*		*			*TS			*		*		+		*			*	
	*		+			*			*:		*		*		*			*	
-	*5	ESULTS OF TESTS	*88	3-OTS	- O2 SCAL	E *T0	DETERMIN	E THE	*F(	DRCE	* 020	- /	*R	OCKWELL/	*T	J	DZIUBALA,J	*DMS-	DR-2404
AT -	*1	ISING A 0.020-SC	1 * OF	THE	INTEGRAT	ED*EF	FECTS OF	THE MA	*PF	RESSURE	*.6	-	*A		*ST			*VOLU	
		E MODEL (88-OTS									*1.40		* 1	1-FOOT TRANS	D*S.	R	HOULIHAN	*OCT	, 1980
19 ′		F THE SPACE SHU			•		M (MPS) A				*		*N	IC WIND TUNN	E*B	J	BURST	*	
		TLE INTEGRATED				*10	ROCKET B	OOSTER	*		*		*L	(UNITARY)	+-D	MS		*	
,		HICLE JET PLUME					RB) PLUME				*		*		*			*	
		N THE NASA/ARC					HICLE PRE				*		*		*			*	
		WT 11 X 11-FOOT					STRIBUTIO				*		*		*			*	
		EC (TEST IA119)					BENDING	-			*		*		*			*	
	*	, , ,	*				ION LOADS				*		*		*			*	
	*		*				VON HINGE				*		*		*			*	
	*		*			*TS			*		*		+		*			*	
							-				.4.							4	

<del></del>	•	<b></b>						*MODEL						
TEST	*	*	CONFIGURATIONS	*	TECT	*	TYDE OF		*		*	COGNIZANT	* BASI	
ID	* REPORT TI				TEST	*						TEST DMS	*PUBLICA	
	* KEPORT II	1 L.E. *	TESTED	*	PURPOSE	* 	TEST	*MACH RAN	NGE*	AGENCY	* 	PERSONNEL	*OR COMN	MENIS
.nc	- *BECHITC OF	A LOW HOL	100	4 TO 0	DT1111 D10		ronor			B0011111111111111111111111111111111111				
RC 2PT	- *RESULTS OF - *SPEED APPRO				BTAIN BAS							I. ZEMAN/RI, R		
18-1	/*D LANDING E				LITY AND		RESSURE	*0.25 -				MULFINGER/RI,		
A 10 1	•				DATA FOR (			+0 40		12-FOOT PRESSU				1978
	*ENTAL INVES				BITER, DE			*				BROWNSON/NA		
K-151,/	756 TION OF A O				INDIVIDUAL			*	*			RC, C.Q. ALLE	.N*	
	*CALE SPACE				HINGE MOM	_		*	*			SA-ARC	*	
	*E ORBITER M	•		-	TAIN GROU			*	*			HERSEY	*	
	*39-0) IN TH				TS ON PITO			*	*			₩ KLUG	*	
	*/AMES RESEA				ATERAL DI			*	*		*-DN	IS	*	
	*NTER'S 12-F				L STABILI			*	*		*		*	
	*ESSURE WIND	TUNNE*		*ND C	ONTROL WI	TH L*		*	*		*		*	
	*L (OA101)	*			NG GEAR DI			*	*		*		*	
	*	*		*YED,	AND CALIE	3RAT*		*	*		*		*	
	*	*			E 0V102 A			*	*		*		* .	
	*	*		*ATA	SYSTEM (FI	_USH*		*	*		*		*	
	*	*		*STAT	IC TAPS)	*		*	*		*		*	
	*	*		*		*		*	*	:	*		*	
RC	- *RESULTS OF .	* LOW *OV	102	*TO 0	BTAIN BAS	IC S*1	FORCE	* 0.050	)/ *	ROCKWELL/	*W.N	1 ZEMAN/RI, R	*DMS-DR-	-2405
2PT	- *SPEED APPRO			*TABI	LITY AND	CONT *!	PRESSURE	*O 25 -	*	ARC -	*H	MULFINGER/RI,	*VOLUME	02
18-1	/*D LANDING E	(PERIM*		*ROL	DATA FOR (	*01 VC		*0 40	*	12-FOOT PRESSU	*R.5	BURROWS/RI	*SEPT ,	1978
A 101	*ENTAL INVES			*2 OR	BITER, DE	TERM*		*	*	RE TUNNEL	*J.	BROWNSON/NA	\S*	
R-151,7	757*TION OF A O	.050-S*		*INE	INDIVIDUAL	. PA+		*	*		*A-A	RC, C Q. ALLE	N*	
	*CALE SPACE	SHUTTL*		*NEL	HINGE MOM	NTS*		*	*		*/NA	SA-ARC	*	
	*E DRBITER M	DEL (+		*. OB	TAIN GROU	VD E*		*	*		*D 14	.HERSEY	*	
	*39-0) IN TH	E NASÀ*			TS ON PIT			*	*			W. KLUG	*	
	*/AMES RESEA	RCH CE*			ATERAL DI			*	*		*-DN		*	00
	*NTER'S 12-F				L STABILI			*	*		*		*	深 译
	*ESSURE WIND				ONTROL WI			+	*		*		*	peria
	*L (DA101)	*			NG GEAR DI			*	*		*		*	70 W
	*	*			AND CALIE			*	*		*		*	ORIGINAL OF POOR
	*	*			E 0V102 A			*	yk:		*		*	
	*	*			SYSTEM (FI			*	- T		*		*	
	*				IC TAPS)	*		*	, T		*		*	<b>©</b> 70
	*	*		"JIM1	IO (MES)			*	4		*			Ē
	•	7		*		•		-	•		.,,		T	QUALI

	WIND TUNNEL TEST / DMS DATA	PROCESSING		29
* * * TEST * * CONFIGUR.	* * ATIONS * TEST * TYPE OF	+MODEL * * SCALE*	* COGNIZANT TESTING * TEST DMS	* BASIC *PUBLICATION
ID * REPORT TITLE * TEST	ED + PURPOSE * TEST	*MACH RANGE*	AGENCY * PERSONNEL	*OR COMMENTS
ADO	TO OPTAIN PACIS SAFORS	* 0 050/ *F	DOCUMENT - + M ZEMAN/OT	R *DMS-DR-2405
ARC - *RESULTS OF A LOW *OV102 12PT - *SPEED APPROACH AN*	*TO OBTAIN BASIC S*FORCE *TABILITY AND CONT*PRESSURE	•	ARC - *H MULFINGER/F	
218-1 /*D LANDING EXPERIM*	*ROL DATA FOR OV10*		12-FOOT PRESSU*R R. BURROWS/R	
DAIO1 *ENTAL INVESTIGA- *	*2 ORBITER, DETERM*	•	RE TUNNEL *J J BROWNSON/	
CR-151.758+TION OF A 0.050-S*	*INE INDIVIDUAL PA*	* *	*A-ARC, C Q AL	LEN*
*CALE SPACE SHUTTL*	*NEL HINGE MOMENTS*	* *	*/NASA-ARC	*
*E ORBITER MODEL (*	*, OBTAIN GROUND E*	* *	*D W HERSEY	*
*39-0) IN THE NASA*	*FFECTS ON PITCH A*	* *	*G W. KLUG	*
*/AMES RESEARCH CE+	*ND LATERAL DIRECT*	* +	*-DMS	*
*NTER'S 12-FOOT PR*	*IONAL STAPILITY A*	* *	*	*
∗ESSURE WIND TUNNE*	*ND CONTROL WITH L*	* *	*	*
*L (DA101) *	*ANDING GLAR DEPLO*	* *	*	*
* *	+YED, AND CALIBRAT*	* *	*	*
* *	*E THE OVIO2 AIR D*	* *	* *	r •
* *	*AIA SYSTEM (FLUSH* *STATIC TAPS) *	* *	1 *	**
* *	* * * *	• •	*	*
ARC - *RESULTS OF A LOW *OV102	+TO OBTAIN BASIC S*FORCE	* 0 050/ *F	OCKWELL/ *W M ZEMAN/RT.	R *DMS-DR-2405
12PT - *SPEED APPROACH AN*	*TABILITY AND CONT*PRESSURE		ARC - *H MULFINGER/R	
218-1 /*D LANDING EXPERIM*	*ROL DATA FOR OV10*		12-FOOT PRESSU*R R BURROWS/R	
DAIO1 *ENTAL INVESTIGA- *	*2 ORBITER, DETERM*	+ *F	RE TUNNEL *J.J BROWNSON/	'NAS*
CR-151.759*TION OF A 0.050-S*	*INE INDIVIDUAL PA*	* *	*A-ARC, C Q AL	LEN*
*CALE SPACE SHUTTL*	*NEL HINGE MOMENTS*	* *	*/NASA-ARC	*
*E ORBITER MODEL (*	*, OBTAIN GROUND E*	* *	*D W.HERSEY	*
*39-0) IN THE NASA*	*FFECTS ON PITCH A*	*	∗G Ŵ. KLUG	*
*/AMES RESEARCH CE*	*ND LATERAL DIRECT*	* *	*-DMS	* 00
*NTER'S 12-FOUT PR*	*IONAL STABILITY A*	*	*	* 🖺 🛪
*ESSURE WIND TUNNE*	*ND CONTROL WITH L+	* *	*	* 6
*L (OA1O1) *	*ANDING GEAR DEPLO*	* *	* .	· · · · · · · · · · · ·
* *	*YED, AND CALIBRAT*	* *	*	i of
* *	*E THE OVIO2 AIR D*	* *	* *	OF POOR
* *	*ATA SYSTEM (FLUSH*	ж ж ш ш	τ Ψ	
* *	*STATIC TAPS) *	* *	· •	* 5
* *	*	*	•	QUALIT

			WIND TO	UNNEL TEST	/ DMS DATA	PROCESSING				300
	*	*	*		*	*MODEL	*	* COGNIZANT	* BASI	
TEST	*	* CONFIGURATIONS		TEST	* TYPE OF			* TEST DMS	*PUBLICA	
ID	* REPORT TITLE	* TESTED	*	PURPOSE	* TEST	+MACH RANG	E* AGENCY	* PERSONNEL	*OR COMM	MENTS
ARC	- *RESULTS OF A LOV	√ +0V102	*TO OB	TAIN BASIC	S*FORCF	* 0.050/	*ROCKWELL/	*W M ZEMAN/RI, R	*DMS-DR-	-2405
12PT	- *SPEED APPROACH A			ITY AND CON		+0 25 -	*ARC -	*H MULFINGER/RI.		
218-1	/*D LANDING EXPERI	** *		ATA FOR OVI		*0.40	*12-FOOT PRESS	U*R R. BURROWS/RI	*SEPT ,	1978
0A101	*ENTAL INVESTIGA-		*2 ORB	ITER, DETER	M*	*	*RE TUNNEL	*J J BROWNSON/NA	S*	
CR-151.	760*TION OF A O 050		*INE I	NDIVIDUAL P	Д*	*	*	*A-ARC, C.Q ALLE	N*	
•	*CALE SPACE SHUTT	ΓL*	*NEL H	INGE MOMENT	S*	*	*	*/NASA-ARC	*	
	*E ORBITER MODEL	(*	*, OBT.	AIN GROUND	E*	*	*	*D.W.HERSEY	*	
	*39-0) IN THE NAS	5A+		S ON PITCH		*	*	*G. W KLUG	*	
	*/AMES RESEARCH (			TERAL DIREC		*	+	*-DMS	*	
	*NTER'S 12-FOOT F			STABILITY		*	*	*	*	
	*ESSURE WIND TUN	4E *		NTROL WITH		*	*	*	*	
	*L (0A101)	*		G GEAR DEPL		*	*	*	<b>.</b>	
	*	*		AND CALIBRA	_	*	# _	*	* .	
	*	*		OV102 AIR		ж 	*	*	*	
	*	*		YSTEM (FLUS	П* 	* *	τ Ψ	•	*	
	*	*	*>IAI7	C TAPS)	т ш	η 	* *	*	*	
ARC	* - *RESULTS OF A LOV	* +07403	•	TAIN BASIC	C*EUDUE	* 0.0507	*ROCKWELL/	*W.M ZEMAN/RI. R	. *DMS-DR-	-2405
12PT	- *SPEED APPROACH A			ITY AND CON		*0 25 -	*ARC -	*H MULFINGER/RI.		
218-1	/*D LANDING EXPER			ATA FOR OVI		*0 40		U*R R BURROWS/RI		
DA 101	*ENTAL INVESTIGA			ITER. DETER		*	*RE TUNNEL	*J J BROWNSON/NA		
	761*TION OF A O 050			NDIVIDUAL P		*	*	*A-ARC, C.Q. ALLE	N*	
011 .01,	*CALE SPACE SHUT			INGE MOMENT		*	*	*/NASA-ARC	*	
	*E ORBITER MODEL			AIN GROUND		*	*	*D.W HERSEY	*	ORIGINAL OF POOR
	*39-0) IN THE NAS	•	*FFECT	S ON PITCH	<b>A</b> *	*	*	∗G W KLUG	*	· · · · ·
	*/AMES RESEARCH (	CE*	*ND LA	TERAL DIREC	T*	*	*	*-DMS	*	<b>7</b> 12
	*NTER'S 12-FOOT !	P <b>R</b> ∗	*IONAL	STABILITY	A*	*	*	*	*	O Z
	*ESSURE WIND TUNK	NE*		NTROL WITH		*	*	*	*	
	*L (DA101)	+		G GEAR DEPL		*	+	*	<b>本</b>	
	*	*		AND CALIBRA		*	*	*	*	QUAL
	*	*		OV102 AIR		*	*	*	τ. 	⊊∄
	*	*		YSTEM (FLUS	H*	*	*	<b>▼</b>	<b>~</b>	
	*	*	*STATI	C TAPS)	*	*	*	* ·	*	
	*	*	*		ж	*	*	<b>~</b>		7 0

TEST	***************************************	WIND TUNNEL TEST /	DMS DATA PROCESSING		301
14TWT - *ERIMENTAL INVESTI*16, N28, R5, V8, W127*E DATA IN THE NOS*	,		TYPE OF * SCALE*	TESTING * TEST DMS	* BASIC *PUBLICATIONS *OR COMMENTS
**O OO6 SCALE MODEL*	14TWT - *ERIMENTAL INVESTI*16,N28,R5,V8,W12 649	27*E DATA IN THE NOS* FL*E REGION OF THE E* T1*XTERNAL TANK  *  *  *  *  *  *  *  *  *  *  *  *  *	* 0 6- *MS * 1 25 * 14 * * * * * **  * * * * * *  * * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * * *  * *  * * *  * *  * * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  * *  *	SFC - *J. E VAUGHN 4-INCH TRISON*G. W KLUG WIND TUNNEL*-DMS  *  *  *  *  *  *  *  *  *  *  *  *  *	* * * * * * * * * * * * * * * * * * *

							]NIW	TUNNEL TEST	<u>/</u>	DMS DATA	PROCE	SSING					30:
	*	*			*		*		*		+MODE	L	*	*	COGNIZANT	* B	ASIC
TEST	k	r 			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS		CATION
ID	* 	REP	ORT 7	ITLE	*	TESTED	* 	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL		OMMENTS
RC	4	DECH	TC OF	TCCT	·	775040504540500											
7SWT	- ×	HISTNG	13 UF	02-50	) ™E	375C 16E64F 16FR22  31M52N108N109N110	H* 10	UBTAIN FORCE	A*P	RESSURE			*ROCKWELL/		J. DAILEDA		
2	/*	F MOD	FI (E	02 JU/	4 L T C	N111R20U1V27V29V	T#81 I	MUMENI DATA L	N* P	URCE	*2 5		*ARC -		MARROQUIN/		
156B	· ' :	DF TH	F SPA	ACE SHI	/ ""	IOVT11VT14VT17W1	I TALL	. VEMILLE ELEP	** ***		*		*9-FOOT BY			FION*JULY	, 198
	498	TLE I	NTEGE	ATED 1	J	T39S27		S (URBITER, E NAL TANK, AND			*		*OT SUPERSO			*	
,				HE NAS		1100027		H SOLID ROCKE			*		*WIND TUNNE	•		*	
				ARCH (				STER), WING A			*		*NITARY) *	*-D	MS	*	
	¥	NTER	9X7 F	00T St	JP*			VERTICAL TAIL					T	*		*	
	ادیر	ERSON	IC WI	ND TUN	۷N*			D INDICATORS.					Ψ Ψ	*		*	
		EL (I			*			VON AND RUDDE			*		*	•		*	
	*	e e			*			GE MOMENTS. A			*		· *	*		*	
	4	•			*			BASE-BODYFLAF			*		*	*		*	
	*	•			*			SSURE DATA	*		*		*	*		*	
	*	•			*		*		*		*		*	*		*	
С	- *	RESUL.	TS OF	TESTS	*B	75C16E64F16FR22F	OT*F	OBTAIN FORCE	A*P	RESSURE	*1 55	_	*ROCKWELL/	*.J	J. DAILEDA	AND*DMS-I	1R-2408
SWT	*	USING	A O	02-SC#	\ <b>L</b> *G	1M52N108N109N110	O*ND	MOMENT DATA C	N*F	ORCE	*2 5		*ARC -		MARROQUIN/		
2	/*	E WOD!	EL (8	9-DTS)	) +N	[111R20U1V27V29V	T*ALL	VEHICLE ELEM	*		*		*9-FOOT BY				
156B	*	OF TH	E SPA	CE SHL	JT * 1	OVT 11VT 14VT 17W10	3*ENT	S (ORBITER, E	Х*		*		+OT SUPERSO			*	,
- 160,						T39S27	*TER	NAL TANK, AND	*		*		*WIND TUNNE	L (U*M	M. MANN	*	
				HE NAS				H SOLID ROCKE			*		*NITARY)	*-D	MS	*	
				ARCH C				STER), WING A			*		*	*		*	
				OOT SU				VERTICAL TAIL			*		*	*		*	
				ND TUN	IN*			D INDICATORS,			*		*	*		*	~ ~
	*	EL (I/	4 156B	)	+			VON AND RUDDE			*		*	*		*	¥ Ş
	*				*			GE MOMENTS, A			+		*	*		*	
	*				*			BASE-BODYFLAP	*		*		*	*		*	<u> </u>
	*				*		*PRE	SSURE DATA	*		*		*	*		*	ΖĘ
	*				*		*		*		*		*	*		*	OF POOR
																	<b>O</b> 5
																	QUALII
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	WIND TUNNEL TEST	/ DMS DATA	PROCESSING			303
*	*	*	*MODEL	* *		* BASIC
TEST * * CONFIGURATIONS		* TYPE OF		E+ TESTING *		*PUBLICATIONS
ID * REPORT TITLE * TESTED	* PURPOSE	* TEST	*MACH RANG	E* AGENCY *	PERSONNEL	*OR COMMENTS
ARC - *RESULTS OF TESTS *B75C16E64F16FR2	H*TO OBTAIN FORCE /	A*PRESSURE	*1.55 -	*ROCKWELL/ *J	J. DAILEDA AND	*DMS-DR-2408
975WT - *USING A 0 02-SCAL*G1M52N108N109N1	IO*ND MOMENT DATA OF	N*FORCE	*2.5		MARROQUIN/ROC	
272 /*E MODEL (89-OTS) *N111R2OU1V27V29	/T*ALL VEHICLE ELEM	*	*	*9-FOOT BY 7-FO*K		*JULY, 1980
IA156B *OF THE SPACE SHUT*10VT11VT14VT17W	13*ENTS (ORBITER, EX	X*	*	*OT SUPERSONIC *A		*
CR-160,500*TLE INTEGRATED VE*1T39S27	*TERNAL TANK, AND	*	*	*MIND TÜNNEF (N+W		*
*HICLE IN THE NASA*	*EACH SOLID ROCKE		*	. =	DMS	*
*/AMES RESEARCH CE*	*BOOSTER), WING A		+	*		<b>K</b>
*NTER 9X7 FOOT SUP*	*ND VERTICAL TAIL		*	*		*
*ERSONIC WIND TUNN*	*LOAD INDICATORS,		*	* *		<b>.</b>
*EL (IA156B) *	*ELEVON AND RUDDE		*	* *		r 1
* *	*HINGE MOMENTS, A		*	* *		* <b>t</b>
* *	*ND BASE-BODYFLAP *PRESSURE DATA	*	*	*		*
* *	*PRESSORE DATA	•	* *	* *		*
LARC - *ADDITIONAL TRANSO*ORBITER	*VERIFY STABILITY	*EODCE	*0 015 /	*LARC / *B	. SPENCER.JR.,G	*DMS-DR-2409
LARC - *ADDITIONAL TRANSO*ORBITER 8TPT - *NIC STABILITY AND*	*AND CONTROL INCR		*.6 -			*SEPT , 1981
803 /*CONTROL CHARACTE *	*MENTS DERIVED FRO		*1.2	*8-FOOT TRANSON*J	UNDERWOOD, USC	* 0
LA115 *RISTICS OF A 0.01*	*M PREVIOUS TESTS		*	*IC PRESSURE TU*B		· \
CR-160.842*5 SCALE(REMOTELY *	*SUBJECTED TO UNK		*	*NNEL *-	DMS	*
*CONTROLLED ELEVON*	*OWN BLOCKAGE AND		*	* *		* 79 \$
*) MODEL 44-0 SPAC*	*SHOCK REFLECTION	*	*	* *		* ∺ ∺
*E SHUTTLE ORBITER*	*EFFECTS AND OBTA:	I *	*	* *		OF POOR
*TESTED IN THE NA *	*N ADDITIONAL STAR	₿*	*	*		<del>-</del>
+SA/LARC 8-FOOT TP+	*ILITY AND CONTROL	L*	*	*		* Q:
*T (LA115) *	*DATA	*	*	* *		*
* *	*	*	*	* *	/	* Q 7 * Q 7 * BMS-DR-2410
AEDC - *RESULTS OF THE NA*ORBITER WING TI	*DETERMINE AERODY	N*HEAT-TRAN	S*7 9 -			
HWTB - *SA/RI ORBITER WIN*(MODEL 91-0)	*AMIC HEATING TO		*8 O			*JUNE. 19792
V41B-R3A /*G TIP HEATING TES*	*HE ORBITER WING	L*	*	*HYPERSONIC WIN*J		* •
OH56 *T WITH THE O 08-S*	*EADING EDGE	*	*	*D TUNNEL (B) *-	DM2	r •
CR-151,777*CALE ORBITER WING*	*	π 	* •	т т че ж		*
*MODEL (91-0) IN *	ж 	•	T.	* *		*
*THE AEDC VKF B HY*	₩ ₩	*	*	* *		*
*PERSONIC WIND T * *UNNEL (OH56) *	<b>™</b>	*	*	* *		*
**************************************	*	*	*	* *		*
Υ 7	<del>.</del>	•				

												WINE	) TU	NNEL	TEST	/	DMS	DATA	PRO	CES	SING									3	04
	*											*				*			*M(	DEL		*			*	c	OGNIZANT		BAS	IC	~ •
TEST	*	1					,	. (	ONF	I GUR	ATIONS	; *		TES1	Γ	*	TYP	E OF				*	TESTI	NG	*		ST DMS		UBLIC		NS
10	*	· F	REPO	₹T	TI'	TLE	,	•		TEST	ED	*	Р	URPOS	3E	*	TE	ST	+ M.	CH	RANGE	*	AGENC	Υ	*	Р	ERSONNEL	*0	R COM	MENT	S
3.5HWT - 234-1 IH9O CR-167,38 ARC - 3.5HWT -	**************************************	*RAN** (** CONTROL **	SFEI E SPA FEGRA OULT: OTS E NAS DT HI SULT: SSFEI E SPA EGRA	RACTERNATE SWITTERNATE SWITTERNATERNATERNATERNATERNATERNATERNATERN	EST DATE OF STATE OF	TS CT	**************************************	*2F *38\$ *60- *2F *38\$	OM1	6R18 (B 6R18	<b>62</b> C 12E	**************************************	SFER SFER SFER SFER SFER SFER SFER SFER	RATE NS ON HUTTE VEHI IMULA AGE O R INI IGHT	E DIS N THE N THE LELE LICLE CORME TEATTI HE DIS HE DIS HE LE LICLE CONTROL	TR**  TEX  TIE  TIE  TIE  TR*  * * * * * * * * * * * * * * * * * *			** * * * * * * *	5.2 5 2	- 175/	*300 *NE *** *** *** *** ***	C 5-FOO NIC W L CKWEL C 5-FOO NIC W	- IT HYPI IND TI	*T. ER*R. ********************************	OKU R R. W OMS	CUMMINGS, AND /RI WATANABE/R HOULIHAN KLUG  CUMMINGS, NO /RI WATANABE/R HOULIHAN KLUG	*VI *C * * * * * * * * AR*E	OLUME EC., OMS-DR	: 01 19 :-241 : 02	82
97SWT -	- * /* 58* * *	RES USI E M OF TLE HIC	NG / IODEI THE	NO. () SP TEG IN K7	OC 47 ACI RAT THI FOO INI	S SC OTS SH SED NA	AL* UT* VE* SA*	B62 8R5 T39	V8F	D3F9	31M16N	*RE *DYN *ALL *NTS *ESS *N # *LO# *LO#	TO NAMI VES (O SURE AND ADS AD I THE	JECTI OBTAI C LOA HICLE .T,S) INTE TO ME DIREC NDICA WING AIL	IN AE ADS O E ELE ) BY EGRAT EASUR CTLY ATORS	RO* DN * EME* PR* FIO* RE * BY* ERT*	ORCE			0 1 55 2 50	-	*AR *9- *OT *WI	FOOT SUPE	BY 7-1 RSONIC	*L FO*S C *G	PL R. W.	PANGLER/RI EBLANC/RI HOULIHAN KLUG	*\	MS-DR YOLUME EB ,	01 19 OF FOOR COST	

	WIND TUNNEL TEST	/ DMS DATA	PROCESSING			305
* *	*	* * TYPE OF	*MODEL	* E* TESTING	* COGNIZANT * TEST DMS	* BASIC *PUBLICATIONS
TEST * * CONFIGURATIONS ID * REPORT TITLE * TESTED	* TEST * PURPOSE	* TEST	*MACH RANGE	-	* PERSONNEL	*OR COMMENTS
10 * REPORT TITLE * TESTED						
ARC **RESULTS OF TESTS **B62C9E64W131M16N2	*THE DBJECTIVES \	WE*FORGE	+ 0.03/	*NRLAD /	*R.H.SPANGLER/RI	*DMS-DR-2413
97SWT - *USING A O O3 SCAL*8R5V8FD3F9	*RE TO OBTAIN AE		* 1 55-	*ARC -	*L P LEBLANC/RI	*VOLUME O2
242-1 /+E MODEL (47-OTS) *T39S27	*DYNAMIC LOADS OF		* 2 50		D*S R HOULIHAN	*FEB , 1982
IA105B +OF THE SPACE SHUT*	*ALL VEHICLE ELE	ME*	*	*OT SUPERSONIC	∗G W KLUG	*
CR-160.859*TLE INTEGRATED VE*	*NTS (0,T,S) BY I	PR*	*	*WIND TUNNEL (	J*-DMS	*
*HICLE IN THE NASA*	*ESSURE INTEGRAT	IO*	*	+NITARY)	*	*
*/ARC 9X7 FOOT SUP*	*N AND TO MEASURE	E *	*	*	*	*
*ERSONIC WIND TUNN*	*LOADS DIRECTLY	BY∗	*	*	*	*
*EL (IA105B) *	*LOAD INDICATORS	*	*	*	*	*
* *	*ON THE WING, VE		*	*	*	*
* *	*ICAL TAIL AND E	LE*	*	*	*	*
* *	*VONS	*	*	*	*	*
* *	*	*	*	*	*	*
AEDC - *CALIBRATION TESTS*B74C16N108PR4PR7			,	*NRLAD /	*W E WHITE/ARO, IN	
PWT16T - *OF THE SPACE SHU *R8PR14VT18VT19	*BRATION OF THE	SI*	*0 2 -	*AEDC -	*. AEDC DIVISION	
431 /*TTLE AIR DATA SYS*99-0	*DE-MOUNTED AIR	DA*	*1 55		P*T.J DZIUBALA AND	
OA232	<b>≯TA PROBES AND</b>	*	*		U*R.R BURROWS/ RI	*
CR-160,484*SCALE ORBITER FOR*	*THE NOSE BOOM-M		*	+NNEL (PWT-16T		*
*EBODY MODEL (99-0*	*NTED FT PROBE,		*	*	*G W KLUG	*
*) IN THE AEDC 16T*	*E DETERMINE LO		*	*	*-DMS	*
*PROPULSION WIND *	*L ANGLE OF ATTA		*	*	*	*
*TUNNEL (0A232) * .	*, MEASURE PROBE		*	+	*	*
* *	*TATIC PRESSURE		*	*	*	*
*	*ROR, AND DETERM		*	<b>*</b>	*	# .t.
*	*E EFFECT OF PRO		*	*	*	π 
* *	*SCALE	*	*	*	*	*
* *	*	*	*	*	* *W E.WHITE/ARO.IN	*  C+DMC_DD_0/(1/4
AEDC - +CALIBRATION TESTS+B74C16N108PR4PR7				*NRLAD /	* AEDC DIVISION	
PWT16T - *OF THE SPACE SHU *R8PR14VT18VT19	*BRATION OF THE		*0 2 ~	*AEDC -	* AEDC DIVISION P*T J.DZIUBAŁA AND	
431 /*TTLE AIR DATA SYS*99-0	*DE-MOUNTED AIR	DA*	*1 55		U*R.R BURROWS/ RI	
0A232 *TEM USING A 0 10-*	*TA PROBES AND	*	**	*NNEL (PWT-16T		
CR-160,485*SCALE ORBITER FOR*	*THE NOSE BOOM-M		**	*IVINEL (PWI-101	*G W KLUG	<b>*</b>
*EBODY MODEL (99-0*	*NTED FT PROBE.		*	*	*-DMS	Ψ Ψ
*) IN THE AEDC 16T*	*E DETERMINE LO		Ф	<b>↑</b>	* DN3	*
*PROPULSION WIND *	*L ANGLE OF ATTA		7 4	ন -₽	*	*
*TUNNEL (DA232) *	*, MEASURE PROBE		<b>~</b>	r -	•	•
* *	*TATIC PRESSURE		** **	· ·	*	·
* *	*ROR, AND DETERM		*	·	*	*
* *	*E EFFECT OF PRO	DE *	•	 *	*	*
* * * * * * * * * * * * * * * * * * *	*SCALE	**************************************	4	*	*	*
* *	<b>т</b>	<del></del>		•		

			WIND TUNNEL	TEST / DMS DA	TA PROCESSIN	G 			30
	*	+	*	*	*MODEL	*	* COGNIZAN	* B/	ASIC
TEST	*		RATIONS * TES			LE* TESTING	* TEST DMS		ICATION
ID	* REPORT TITL	E * TES	red * PURPOS	SE * TEST	*MACH RAN	GE* AGENCY	* PERSONNEL	. *OR CC	OMMENTS
20	***************************************	CTC +CCU 400 0	DOITED OFOSTAIN CON	or Alb France	* 0.00	/ *ROCKWELL/	*J J DAILEDA/F	OCKN+DMC-I	00-2445
	<del>-</del>		RBITER C+OBTAIN FORG		* 0 02 *2.0 -	+AEDC -	*ELL	*VOLU	
	/*E MODEL (105-	-:	RIFY THE OF	***	₹2.0 - ₹8.0		WIN*J.L JORDAN/AF		
	) *F THE SPACE S				78.0	*D TUNNEL (A		O, IN ONIV.	, 15
			*STABILITY /		*	*D IGNACE (A	*G G MCDONAL	n *	
(51,78	34+LE VEHICLE OR		*TROL CHARAC	- · - · · · · - ·	T	4	*-DMS	.∪ ↑	
	*R IN THE ARNO		*ICS IN PIT		₹	- <b>T</b>	*-DM2	•	
	*NGINEERING DE		*YAW, AND VI		*	**	*	*	
	*PMENT CENTER		*ONTROL EFF		Υ	<b>*</b>	*	T	
	*KARMAN FACILI		*ESS AND TR		*	<b>▼</b>	* •	*	
	*UPERSONIC TUN		*TS IN THE		*	π 	* ±	4	
	*A (DA209) AND		*MBER RANGE	FRUM 2*	*	<i>π</i>	* *	* *	
	*ERSONIC TUNNE	r R *	*TO 8	*	*	<b>π</b>	*	*	
	*(DA2O8/209)	₹ `	*	<b>*</b>	*	₹ 	* *	* *	
_	*	*	*	*	*	* ************************************	* DATEDA/	AUUKNADNU I	00-044
			RBITER C*OBTAIN FOR			/ *ROCKWELL/	*J J.DAILEDA/		
			CON MODE+MOMENT DATA		*2.0 -	*AEDC -	*ELL	*VOLUI	
	/*E MODEL (105-		*RIFY THE O		*8 0		WIN*U.L JORDAN/A	NAU*NI,UX	, 19
	9 *F THE SPACE S		*STABILITY		*	+D TUNNEL (A		*	
151,78	35*LE VEHICLE OR		*TROL CHARA	•	*	*	*G G MCDONA	LD Y	
	*R IN THE ARNO		*ICS IN PIT		*	*	*-DMS	*	
	*NGINEERING DE		*YA₩, AND VI		*	*	*	*	
	*PMENT CENTER		*ONTROL EFF		*	*	*	*	_
	*KARMAN FACILI	· · · -	*ESS AND TR		*	*	4	*	ç
	*UPERSONIC TUN		*TS IN THE		*	*	*	*	
	*A (0A209) AND		*MBER RANGE	FROM 2*	*	*	*	*	7
	*ERSONIC TUNNE	LB*	* OT *	*	*	*	*	*	9
	*(UA2O8/2O9)	*	*	*	*	*	*	*	Ş
	*	*	*	+	+	*	*	*	
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					WIND T	UNNFL TEST	/ (	DMS DATA	PROCES	SING					30
					*		*		+MODEL		*	*	COGNIZANT	*	BASIC
TEST	1			* CONFIGURATIONS	*	TEST	*	TYPE OF		-	* TESTING	*		*P(	JBLICATION
ID	,	REPORT	TITLE	* TESTED		PURPOSE	*				* AGENCY	*	PERSONNEL	*01	R COMMENTS
ISFC	- 1	RESULTS O	F TESTS	*LBM	*TQ 08	TAIN 6-COMP	0+F0	DRCE	* 0.00	4 /	*ROCKWELL/	*N.	S. DOUGHERTY,	A*DI	MS-DR-2416
WT		IN THE NA			*NENT	FORCE & MOM	E*		+ 6	-	+MSFC -	* C	MANSFIELD/RI	- * Jl	JNE, 198
68		14-INCH T			+NT DA	TA OF ELEME	N+		<b>*4 96</b>		*TRISONIC WIND	*HUI	NTSVILLE	*	
A603		WIND TUNN			*TS LB	M,O,SRB FOR	*		*		*TUNNEL	*J	E. VAUGHN	*	
		004 SCAL			*INTER	FACE STRUCT	ับ*		*		*	*C	R. EDWARDS	*	
		(74-OTS)			*RES A	NALYSIS OF	E*		+		*	*-D!	MS	*	•
		UGMENTED			*T/LBM	, o/et, sre	/*		+		*	*		*	
		UTTLE INT				OF TOTAL VE			*		*	*		*	
		VEHICLE (				FOR ASSESSI			*		*	*		*	
	×	, `			∗G LBM	INFLUENCE	0*		*		*	*		*	
	*	k		*	*N SSL	V FOREBODY	C*		*		*	*		*	
	*	k		*	*OEFFS	, TO OBTAIN	*		*		+	*		*	
	×	•		*		& ELEVON FO			*		*	*		*	
	4	k		*		D MOMENT DA			*		*	*		*	
	4	,		*		WING STRUC			*		*	*		*	
	4	,		<b>+</b>	*URES	ANALYSIS	*		*		+	*		*	
	,	•	,	+	*		*		*		+	*		*	
RC	4	RESULTS D	F AFROTH	*93-0 FLAT PLATE	*TO ME	ASURE DETAI	L*HI	EAT-TRANS	\$*0 04		*ROCKWELL/	*J.	CLEARY/NASA~A	R*DI	MS-DR-2417
		ERMODYNAM				EVON/ELEVON				1	*ARC -	*C,	R.B KINGSLAN	ID∗JI	JNE, 197
35	_	TRANSFER				FUSELAGE/E			*7 3		<b>*3 5-FOOT HYPE</b>	R*/R	I	*	
H58		A 0.03-50				INTERFACE H			*		*SONIC WIND TU	N*D 1	W HERSEY	*	
		EL (93-0)				DISTRIBUTI			*		*NEL	*M	M. MANN	*	
		ING THE E				VERIFY DESI	_		*		*	*-D!	MS	*	
		EVON GAP	•			TING RATES			*		*	*		*	
		ON/FUSELA			*		*		*		*	*		*	
		FACE REGI			+		*		*		*	*		*	
		HE SS ORE			*		*		*		*	*		*	
		THE ARC 3			*		*		*		*	*		*	
	 k	THE MICO C	, 211,41	*	*		*		+		*	*		*	
RC		DECINTS F	F TESTS	*WEDGE SHAPED MODE	*TO OB	TAIN THE TE	M*HI	EAT-TRANS	3*5.O	_	*ROCKWELL/	*B	J. HERRERA/RI	*Di	MS-DR-2418
5HWT				*L TO HOLD DEL GAS					*7.3		*ARC -	*	•	*00	CT., 19
27				*TEMP PROBE		CTERISTICS			*		*3.5-FOOT HYPE	R*	•	*	
H100	,	ATION GAS				EXISTING D			*		*SONIC WIND TU			*	
		TURE PROE				TEMPERATUR			*		*NEL	*		*	
W . 10 17,		AMES RESE			*PR086		*		*		*	*		*	
		NTER 3.5			*	•	+		+		*	*		*	
		RSONIC WI					*		*		*	*		*	
				<b>7</b> ♣	<b>→</b>		*		ar ar		*	*		*	
	٦	Ł (IH100) ĸ	'	T	r						•				

				WIND	TUNNEL TEST	[ /	DMS DATA	PROCES	SSING						308
*		*		*		*		*MODEL	, ×	:	*	COGNIZANT	*	BASIC	
TEST *		*	00 20011111 20110	*	TEST	*	TYPE OF	*	SCALE	TESTING	*	TEST DMS		BLICATI	
ID *	REPORT TIT	LE +	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*0R	COMMEN	NTS
DO	OU TO TO	<b></b>													
			SV 0V102 ORBITE				ORCE	*0.6		ROCKWELL/		H. MULFINGER,			
	IIGALION I	U VER*C	CONFIGURATION MO	*AMIC	STABILITY	AN*		+1.3		LARC -		J. DAILEDA/RO		PT., '	197
5 /*IF	Y SHUTTLE	ORBIT*C	DEL 104-0 INSTRU					*		*16-FOOT TRANS		LL INTERNATIO	)N*		
2/08/U *ER	ALRU-CHAR	ACTER*E	NTED ELEVONS	*ERIS	TICS AND CO	*TM		*	4	NIC TUNNEL	*AL		*		
-151,/62*15	TICS AND E	XAMIN*S	SV 0V102 ORBITE	R*ROL	SURFACE HIN	IGE*		*	4	*		PUTNAM, W. CO	)M*		
*E	TRANSUNIC	BLDCK *C	CONFIGURATION MO	*MOME	NTS ON THE	0 *		*	4	•		N/LARC	*		
			EL 105-0 RIGID		CONFIGURAT	10*		+	4	•		G. MCDONALD	*		
	CTION EFFE		RCE MODEL	*N		*		*	4	<b>'</b>	* - DM	S	*		
	LIZING 02			*		*		*	4	•	*		*		
	HI-FIDELIT			*		*		*	×	,	*		*		
	S 104-D AN			*		*		*	*	•	*		*		
	IN THE LAI			*		*		*	*	<b>K</b>	*		*		
	SEARCH CEN			<del>π</del>		*		*	*	,	*		*		
	FT. TRANSO			*		*		*	*		*		*	•	
	D TUNNEL O	A270B*		*		*		*	1	k	*		*		
*/C		*		*		*		*	×	•	*		*		
*	C11/ TC C= =	*		*		*		+			*		*		
			ODEL 83-0 LINES				EAT-TRANS	-		ROCKWELL/		LAMOINE/RI		S-DR-24	-
TB - *0N	A 0.04~SC	ALE S*V	L70-000140C		ING RCC-RSI			*7 B8		AEDC -	*J.		*NO	V , 1	198
18-V2A /+PA					FACE AREA O			*8 O		HYPERSONIC WI			*		
	R FOREBODY				R FUSELAGE	*		*	*	D TUNNEL (B)	*-DM	S	*		
-167,385*L					OBTAIN RCS	NO*		*	*	k	*		*		
	C VKF HYPE			*ZZLE	HEATING	*		*	*	k	*		*		0
_	WIND TUNNE			*		*		*	*	<b>t</b>	*		*	•	Ç
	OBTAIN AE			*		*		*	*	<b>k</b>	*		*		P77
	MIC HEATING			*		*		*	×	•	*		*		POOR
	IBUTION ON			*		*		*	*	•	*		*		ŏ
	FUSELAGE A			+		*		*	×	t .	*		*		$\bar{z}$
	NOZZLE AREA	AS (D*		*		*		*	*	•	*		*		
*H1	03A)	*		*		*		*	*	•	*		*	•	Õ
*		*		*		*		*	4	•	*		*		QUA

						WIND	TUNNEL TE	ST / t	DMS DATA	PROCES	SSING				<b>_</b>	309
		·		*		*		*		*MODE1	- <i></i> - L	*	*	COGNIZANT	* BAS	IC
TES1	Г	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	+	SCALE	* TESTING	*	TEST DMS	*PUBLIC	
ID		*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	+ AGENCY	*	PERSONNEL	*OR COM	MENTS
ARC 975WT 282-1 875WT 0A251B, CR-160.	/c //c	- COTTO **TDIA****  *******  5 *****  6 *****  6 ******	ALIBRATION TESTS THE SPACE SHU TLE ORBITER AIR ATA SYSTEM USING O.10-SCALE ORB TER FOREBODY MOD L (99 0) IN THE ASA AMES RESEARG CENTER 9 X 7 AN 8 X 7-FOOT LEGS THE UNITARY P AN WIND TUNNEL (A251B AND C) ALIBRATION TESTS	**************************************	9-0 74C16N108PR7PR8P 14VT18VT19 9-0 74C16N108PR7PR8P 14VT18VT19	**************************************	OBJECTIVE SE TESTS W DETERMINE A SYSTEM P STOT AND S RESSURE ER TE EFFECT PRESSURE TION; CALC GLE-OF-AT GOR, EVALU 'FLUSH PO ERNATE AIR 'STEMS OBJECTIVE	S OF *FO PERE * PROB *	DRGE	* 1 ( !	0.10/ 6- 5	*ROCKWELL/ +ARC *9-FOOT BY 7- *OT SUPERSONI *WIND TUNNEL *NITARY) *8-FOOT BY 7- *OT SUPERSONI *WIND TUNNEL *WIND TUNNEL ** ** ** ** ** ** ** ** ** ** ** ** **	*AR FO * C !! FO * C !! * * * * * * * * * * * * * * * * * *	GAWIENOWSKI, W NDERSON/ ARC R BURROWS, W.R ARLSON/ RI W HERSEY W KLUG OMS GAWIENOWSKI, W JERSON/ ARC R.BURROWS, W R ARLSON/ RI W HERSEY W KLUG	*VOLUME *DEC , * * * * * * * * * * * * * * * * * * *	01 1980 -2421 02

			WIND T	TUNNEL TEST	/	DMS DATA	PROCES	SSING						310
ж	k	*	*		*		*MODEL	 L	*		*	COGNIZANT	* 8	ASIC
TEST 1	<b>,</b>	* CONFIGURATIONS		TEST	*	TYPE OF			* TESTIN	IG	* T	EST DMS	*PUBL	ICATIONS
ID ,	* REPORT TITLE	* TESTED	* 	PURPOSE	*	TEST	*MACH	RANGE	+ AGENCY	' 	*	PERSONNEL	*OR 0	OMMENTS
troo .	SEC. 11 70 OF THE													
EDC - *	KESULIS OF THIN : KIN THERMOCOUPLE	S+30/10/40-DEGREE				HEAT-TRANS			*MMC	/		Y R CARROLL	•	
	TESTS CONDUCTED			GE IN HEATIN			*5.5		*AEDC	-	*MMC		*APRI	L, 1979
	N THE AEDC VKF TI			NY DUE TO 1			*		*SUPERSON				*	
	NNEL A TO DETERM			ALL CHANGE 1			*		*D TUNNEL	. (A)	*C. R		*	
	NE HEAT TRANSFER			NOSE SPIKE (			*		*		*-DMS		*	
	RATES ON A .0275			SURATION^ +			# 		*		*		*	
	SCALE SSV ET FOR			ASURE INTERF HEATING ON	-		*		*		*		*	
	BODY (FH15)	L, r					*		*		*		*	
	(11115)	" •		SURFACE AROL			*		<b>本</b>		*		*	
		T.		FORWARD FA			*		*		*		*	
	•	* *		TRAYS.GOX L			*		*		*		*	
,	•	T.		BRACKETS W			*		*		*		*	
		- -		TUBERANCES					<del>*</del>		*		7K 	
	•	* •	* C PKL	) OBERAINCES	*		*		亦 .i.		*		*	
RC - +	PESILITS OF THIM	5+30,10,40 DEGREES		MINE THE CL		JEAT - TDANG			*MMC	,	*FRVDD	Y R. CARROLL	/white	.nn_0400
		*CONICAL SPIKE FOR				TEAT - I RAIN	, ·		*ARC	_	*MMC	T R. CARROLL	-SMU∗∖ NAU∗	
	TESTS CONDUCTED	**************************************		THE CHANGE			*			- HVDEI		J. BROWNSON		, 1500
•		*		O.40 DEG CO					*SONIC WI			0. BROWINGOIN	/ ·	
	3 5 FT HYPERSON			PIKE TO A 30			*		*NEL	.140 101		EDWARDS	*	
	C WIND TUNNEL TO			DEGREES CO			*		*		*-DMS		*	
	DETERMINE HEAT TE		*ICAL	•	*		*		*		*		*	-
	ANSFER RATES ON			ASURE INTER	)F*		*		*		*		*	
	.0275 SCALE SSV	· ·		E HEATING			*		*		*		*	• -
	ET FOREBODY (FH16)			SURFACE AROL			*		*		*		*	~_
*	,	*			*		*		*		+		*	
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* *	* * *	*MODEL *	* COGNIZANT	* BASIC
TEST * + CONFIGURA				*PUBLICATIONS
ID * REPORT TITLE * TESTE	D * PURPOSE * TEST	*MACH RANGE* AGENCY	* PERSONNEL	*OR COMMENTS
- +RESULTS OF TESTS +B62C9E64F9M	1605VQ+DETERMINE THE FFF+FRDCF	*O 6 - *RDCKWELL/	*S R. HOULIHAN,	/RO*DMS-DR-2424
97.87- *ON THE EFFECTS OF*W131N112FD3	MOR *FOT OF AFROELASTI*	+2 5 *ARC -		
9-1 /*AEROELASTICITY 0 *	*CITY OF THE ORBIT*	* *11-FOOT		*OCT . 1980
SWT - *F THE SPACE SHUTT*	*ER VERTICAL TAIL *		, UNI*M M MANN	*
26A.B.C*LE ORBITER VERTIC*	*ON THE LATERAL DI*		TUNN*-DMS	*
160,506*AL TAIL USING A O*	*RECTIONAL STABILI*	*	*	*
* 03-SCALE MODEL (+	*TY, RUDDER CONTRO*	* *9-FOOT BY	7-F0*	*
*47-0) IN THE NASA*	*L CHARACTERISTICS*	* *OT SUPERS	ONIC *	*
*AMES UNITARY WIN *	*AND TAIL LOADS O *	* *₩IND TUNN	EL (U*	*
*D TUNNELS (DA126A*	*F THE ORBITER *	* *NITARY)	*	*
*/B) *	* *	+ +	*	*
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- *RESULTS OF TESTS *B62C9E64F9N		*O.6 - *ROCKWELL/		
97,87- *ON THE EFFECTS OF *W131N112FD3		*2 5	Ottoball Till Committee	
9-1 /*AEROELASTICITY O *	*CITY OF THE ORBIT*	* *11-FOOT,		*OCT , 1980
SWT - *F THE SPACE SHUTT*	*ER VERTICAL TAIL *		, UNI*M M MANN	*
126A,B,C*LE ORBITER VERTIC*	*ON THE LATERAL DI*		TUNN≯-DMS *	π 
160,507*AL TAIL USING A O*	*RECTIONAL STABILI*	* *EL * *9-FOOT BY		<i>∓</i> .u.
* 03-SCALE MODEL (*	*TY, RUDDER CONTRO*	* *9-FUU  B1	•	<i>™</i>
*47-0) IN THE NASA*	*L CHARACTERISTICS*	* *WIND TUNN		*
*AMES UNITARY WIN *	*AND TAIL LOADS O * *F THE ORBITER *	* *NITARY)	*	*
*D TUNNELS (DA126A*	*	* *	*	*
*/B) *	· · · · · · · · · · · · · · · · · · ·	* *	*	*
- *RESULTS OF TESTS *SSV 102 ORE	TTED C*DETERMINE EFFECT *FORCE	* 0 03 / *ROCKWELL/	*S R. HOULIHAN	/RO*DMS-DR-2424
97.87- *ON THE EFFECTS OF ONFIGURATION		*0 6 - *ARC -	,	*VOLUME 03
-1 /*AEROELASTICITY O *	*OF ORBITER VERTI *		9-FOO*W. ANDERSON/ARG	*OCT . 1980
26A,B,C*F THE SPACE SHUTT*	*CAL TAIL ON LATER*		. UNI*D W HERSEY	*
160.508*LE ORBITER VERTIC*	*AL DIRECTIONAL ST*	* +TÁRY WIND	TUNN+G G. MCDONALD	*
*AL TAIL USING A O*	*ABILITY, RUDDER C*	*	*-DMS	*
* 03-SCALE MODEL (*	*ONTROL CHARACTERI*	* +	*	* 2
*47-0) IN THE NASA*	+STICS AND TAIL LO+	* *	*	* * * * *
*AMES UNITARY WIN *	*ADS OF THE ORBITE*	* *	*	*
*D TUNNELS (DA126A*	*R VEHICLE. THREE *	* *	*	* >
*BC) *	*TAILS (RIGID, PRE*	* *	*	* \$
*	*SSURE INSTRUMENTE*	* *	*	
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TEST	7	K -			*	CONFIGURATIONS		TEST	*	TYPE OF		SCALE:			*	TEST DMS		PUBLIC/	
ID		r .	REPORT T	.TLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* 	AGENCY	* 	PERSONNEL	*	OR COM	MENTS
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124	- •		SONIC-BO								*4.14			NITARY PLAN W		G. MCDONALD			
-X			TO THE					HEORY TO THE S			*		 T.I.		*u *÷Dl		*		
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11						TLE VEHICLE		NCES AND CONNE			*35			UPERSONIC WIN					1901
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TEST	- -		٠.	CONFIGURATIONS	. *	TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBLIC	CATIONS
ID		REPORT TI	TLE *		, · *	PURPOSE		TEST			* AGENCY	*	PERSONNEL	*OR COM	MENTS
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.ERC	_ +	WIND THANEL	TECTC*	84-0TS- 035 SCA	u *TO (	IRTAIN PRESS	118 + F	RESSURE	* 035	5 /	*ROCKWELL/	*P.	R CARROL/RI.	W+DMS-DE	₹-2428
OSWT	- 4	WIND LOWNER	5-SCA *	E MODEL OF THE I	N+F D	ATA IN THE V	TC*		*2 5		*LERC ~	*	GERSTENMA I ER	NA*VOLUME	E 03
45				TEGRATED SPACE S					*3.5		*10 BY 10-F00T	+SA		*FEB.,	1981
H11				UTTLE VEHICLE		S AND CONNE			*		*SUPERSONIC WI	N*S	R. HOULIHAN	*	
		E 84-OTS IN				HARDWARE ON			*		*D TUNNEL		W. KLUG	*	
K-100.		ASA/LEWIS 1				ORBITER.EXTE			*		*	*-D	MS	*	
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		1)	( 1111 .			RDER TO DETE			+		*	*		*	
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ERC	- *	MIND IDNUEL	15515*	84-0TS035 SCA	LEXIO (	JBIAIN PRESS	17.724 17.724	RESSURE	*2 5		*LERC -		GERSTENMAIER		
OSWT				E MODEL OF THE I					*3.5		*10 BY 10 FOOT			*FEB ,	
45				TEGRATED SPACE S					*3.5		*SUPERSONIC WI				,,,,,
H11				UTTLE VEHICLE		S AND CONNE			т _		*D TUNNEL		W KLUG	*	
R-160,		E 84-OTS IN				HARDWARE ON			т 		*D 101414EF	*-5		*	
		ASA/LEWIS 1				ORBITER, EXTE			т Т		т ш		MJ	*	
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		WIND TUNNEL	(IH1*			KET BOOSTER			*		* *	ı		•	
	*	1)	*			RDER TO DETE			*		<i>™</i>	Ţ		<b>.</b>	
	*		*			AERODYNAMIC			*		*	<b></b>		- L	
	*		*			ING RATES IN	1 T*		*		*	<b>**</b>		*	
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	+		*		*		*		. *		*	*		T Chiloup Di	0.440
\RC	- *	THIN SKIN H	EAT TR*	OT FLAT PLATE		PURPOSE OF		IEAT-TRAN			*ROCKWELL/		W. CUMMINGS /		
3.5HWT	- +	ANSFER TEST	S OF A*	580TS		TEST WAS TO			*5 3		*ARC -		F OKUNO /ARC	*APRIL	, 1982
39	/*	SIMULATED S	PACE *			MAMYGORBA P			*5.3		*3.5-FOOT HYPE			*	
H51B	*	SHUTTLE O O	4 SCAL*		*INT	ERFERENCE HE	AT*		*		*SONIC WIND TU			*	
R-167.	353*	E SOLID ROC	KET BO*		*ING	DATA ON THE	€*		*		*NEL	*-0	DMS	*	
	*	OSTER/ET MO	DEL (5*			ND SRB IN TH			*		*	*		*	
	*	8-TS) IN TH	E NASA*			KIMITY OF TH			*		*	*		*	
		/ARC 3 5 FO			*FOR\	WARD ET/SRB	AT*		*		*	*		*	
		ERSONIC WIN			*TAC	HMENT AND ON	1 T*		*		*	*		*	
		EL (IH518)	*		*HE /	ATTACH STRUC	*UT		*		*	*		*	
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ID	*	RE	POR	ТΤ	ITLE	*			TEST	ΓED		*	Р	URPO:	SE	*	1	EST	*MACH	RANGE	*	AGENCY	*	P	ERSONNEL	*OR COMM	IENTS
	- *{ /*] *{ 17*3 *{ */	ESTI IFY ER A ISTI E TE AGE LECT	GAT SHU AERO ICS RANS AND ION	ION TTL -CH AND ONI SH EF	TO E OR ARAC EXA C BL DCK FECT	VER* RBIT* TER* MIN* OCK* REF*		02(	MODI	EL 3	39 <b>-</b> 0	*ONG *ATE *L F *MOM *STI *RFA *SS	ITU RAL ORC ENT CS, CE AND	DINAI /DIRI E ANI CHAI CON EFFE	RACTE TROL CTIVE GE	L* NA* * RI* SU* NE*		ee	*0 6 *1.3 * * * *	-	*L/ *16	ARC - 6-FOOT TRANSC	*S.	R M	BULFINGER/RI HOULIHAN MANN	*DMS-DR- *VOLUME *MARCH. * *	01
	* 5 * 6 * 1 * 1 * 1	SCAL REMO DDEL LANO CENT VSON	E H DTE ( 39 GLEY FER NIC 1	I-F CON' -0) RE: 16-1	IDEL TROL IN SEAR FT	O5-+ .ITY+ .M + THE+ ?CH + TRA+ !NNE+						*NE *TUN +ND	THE NEL SHO S O	EFFI BLOG CK RI N TH	D EXA ECT O CKAGE EFLEC ESE C	F * A* T-*			* * * * *		* * * * * * *		* * * * *			* * * * * * *	
			1270	4		*						*				*			*		*		*			*	•
	- *E /*!	RESURESTI FREMENTAGE LECT LECT LECT LECT LECT LECT LECT LEC	GAT SHU' SHU' CS AND TION IZIG E H (39 GLEY TER	ION FTLE CH/AND ONIC SHE EFF VG / CON T-F: CON T-F: TG-I	TO E DR ARAC EXA C BL CCK FECT AN IDEL TROL IN SEAR	VER* BIT* TER*		02(	MODE	EL S	9-0)	*ONG *ATE *L F *MOM *STI *RFA *SS *MOM *NE *TUN *ND	TTU RAL ORC ENT CS. AND THE NELO SHO S	DINAI /DIRI E ANI CON' EFFE HING S ANI EFFF BLOG CK RI N THI	RACTE TROL CTIVE GE D EXA ECT D CKAGE EFLEC ESE C	L* NA * RI * SU * NE * MI * T - *	FORC	E	* 0 6 3 * * * * * * * * * * * * * * * * * *	-	*L; *1	OCKWELL/ ARC - 6-FOOT TRANSO IC TUNNEL	<b>*</b> S	R. M	MULFINGER/RI . HOULIHAN MANN	* *DMS~DR- *VOLUME *MARCH, * * * * * * * * * * * * * * * * * * *	02

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					WIND T	UNNEL TES	ST /	DMS DATA	PROCES	SING					315
			, ,	·	*		*		*MODEL			*	COGNIZANT	* BAS	IC
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<b></b>								•							
ARC	-	*RESULTS OF	VNI NA	OV102(MODEL 39-0)				DRCE	*0 6		ROCKWELL/		H.MULFINGER/RI		
STT		<b>*ESTIGATION</b>				UDINAL AN			*13		LARC -		R HOULIHAN	*VOLUME	
26	•	*IFY SHUTTL				L/DIRECTI			*		16-FOOT TRANS			*MARCH,	1981
270A		*ER AERO-CH				CE AND	*		+		NIC TUNNEL	*-DI	4S	7 <b>4</b>	
-160,		+ISTICS AND				IT CHARACT			*	*		.u.		*	
		*E TRANSONI				, CONTROL			*	*		*		*	
		*AGE AND SH				EFFECTIV	ENE*		*	*		75 .t.		*	
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		+UTILIZING				ITS AND EX			*	*		<u>.</u>		*	
		*SCALE HI-F				E EFFECT			<i>₹</i>	*		<b>1</b> →			
		*REMOTE CON				L BLOCKAG						т -		•	
		*ODEL(39-0)				OCK REFLE			*	· ·		*		*	
		*LANGLEY RE				ON THESE	CHA*		·	*		*		*	
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		+NSONIC WIN	–		*		•			•		*		*	
		*L 0A270A	,	, ,	*	•	Ť.		*	•		*		*	
00		Y AFECT DECLU	TO EDOM	- -OTS-T38526B62C12M	4+TO OE	TATAL COM	/60T+U	CAT-TOAK!	S* 0 01	175 / *1	POCKWELL/	*.1 \	CUMMINGS/RI	*DMS~DR	-2431
DC	_	TIEST RESUL	IS FRUM	16W116E52V8R18F1	4410 OC	TEAT_TOANS	. C C D +	LAI INAN	+3.01	- *	AEDC -		NUTT/AEDC-VK		
TA WE	Ξ,	*IME NASA/R	NAL CD	OT-T38B62C12M16W	/* 1 V C   C	TRANCTOTRI	IT I O *		+4.02		SUPERSONIC WI		•	*APRIL.	
1A-45 85						THE SPACE			*		D TUNNEL (A)			*	
						E INTEGRA	-		<b>+</b>	*			W. KLUG	*	
-151,		*RATED VEHI *T USING A				LE DURING			*	*		*-Df		*	
		*SCALE MODE				TED FIRST			*	*		*		*	
		*T3) CONDUC				OND STAGE			*	*		*		*	
		*THE AEDC-V				ONS OF TH			*	*		*		*	
		*EL A (IH85		<b>k</b>		PROFILE	*		*	*		*		*	
		*EF W (IMO:	,	, <b>k</b>	*	I KOI ILL	*		*	*		*		*	
DC	_	, ******* *****************************	TS EDOM:	*DTS-T38S26B62C12!	#±TO OF	TATH CON	/FCT+H	FAT-TRAN	5 * 0 01	175 / *	ROCKWELL/	*1	W CUMMINGS/RI	*DMS-DR	2-2431 E 02
/TA	_	*THE NASA/E	POCKELL	*16W116E52V8R18F1	0*1VF =	IEAT-TRANS	FER*		*3 O1	- *.	AEDC -	*K.1	NUTT/AEDC-VK	F*VOLUME	02
	. ,	* THE NASA/	INAL SD :	OT-T38B62C12M16W	1 * - RATE	DISTRIBL	ITIO*		*4 02		SUPERSONIC WI	N*/SI	-1	*APRIL,	1990
185				16E52V8R18F10	*NS 0N	THE SPACE	E S*		*	*	D TUNNEL (A)	* J	E. VAUGHN	*	
		*RATED VEHI				E INTEGRA			+	*	, .	*G	W KLUG	*	1300
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						WIND	TUNNEL TEST	/	DMS DATA	PROCES	SING					316
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TEST	*		*	C	ONFIGURATION		TEST	*	TYPE OF			* TESTING	*	TEST DMS	*PUBLIC	
ID	* 	REPORT TIT	LE *	: 	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COM	451412
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EDC WTA		TEST RESULTS THE NASA/ROO							HEAT - I KAN	*3 O1		*AEDC *		W.NUTT/AEDC-VK		
		INTERNATIONA								*4 02		*SUPERSONIC WIF			*APRIL.	
185	•	ACE SHUTTLE					ON THE SPACE			*		*D TUNNEL (A)		E. VAUGHN	*	
		RATED VEHICL			02101110110		TLE INTEGRAT			*		*		W. KLUG	*	
. 131,		T USING A O					ICLE DURING			*		*	*-DI		*	
		SCALE MODEL					LATED FIRST			*		*	*	-	*	
		TS) CONDUCTE	•				ECOND STAGE			*		*	*		*	
		THE AEDC-VKF					TIONS OF THE			*		*	*		*	
		EL A (1H85)	*				HT PROFILE	*		*		*	*		*	
		LL A (1.100)				*	.,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*		*		*	*		*	
DC		TEST RESULTS	: FROM+	лτς	-T38526B62C1	2M∗T∩ :	ORTAIN CONVE	CT*	HEAT-TRAN	S* 0.0	175 /	*ROCKWELL/	*d.	W CUMMINGS/RI	*DMS-DR	-243
TA		THE NASA/ROC								*3.01		*AEDC -		W NUTT/AEDC-VK		04
1A-W5		INTERNATIONA								*4 02		*SUPERSONIC WI			*APRIL.	
1A-WS 85		ACE SHUTTLE					DN THE SPACE			*		*D TUNNEL (A)			*	
		RATED VEHICL			32408 101 10		TLE INTEGRAT	_				*		W. KLUG	*	
151,							ICLE DURING			*		*	+-D		*	
		T USING A O					LATED FIRST					*	*	Ma	*	
		SCALE MODEL	•				ECOND STAGE			•		*	*		*	
		TS) CONDUCTE					TIONS OF THE			•		*	*		*	
		THE AEDC-VKF	· I ONNA *	•				. Fr		•			*		*	
	,	EL A (1H85)	*	•		* 1.10	HT PROFILE	- A		*		•	*		*	
	*	TEST RESULTS	*		T00000000000		OPT 4 THE CONVE	'\##I	1 1 T A T - T 13 A S	E+ 0 V	175 /	*DOCKMELL /	ا.لا	W CUMMINGS/RI	*DMS~DR	-243
DC		THE NASA/ROC								*3 01		*AEDC -		W.NUTT/AEDC-VK		
TA										*4 02		*SUPERSONIC WI			*MAY.	19
1A-W5		INTERNATIONA								*4 02		*D TUNNEL (A)		E. VAUGHN	*	
85		ACE SHUTTLE	-		22488 181 10		ON THE SPACE			<b>*</b>		*		W KLUG	*	
-151,		RATED VEHICE					TLE INTEGRAT			4		<b></b>	*-D		*	
		T USING A O	-				ICLE DURING			·		•	*	193	*	
		SCALE MODEL					LATED FIRST					·	·-		*	
		TS) CONDUCTE					ECOND STAGE			*		T.			*	2
		THE AEDC-VKF	- TUNN+	k.			TIONS OF THE			*					*	
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	WIND TUNNEL TEST	/ DMS DATA	PROCESSING			317
			*MODEL		* COGNIZANT	* BASIC
* * * * * * * * * * * * * * * * * * * *	* **	* **		* E* TESTING	* TEST DMS	*PUBLICATIONS
TEST + + CONFIGURATIONS		* TYPE OF	*MACH RANG		* PERSONNEL	*OR COMMENTS
ID * REPORT TITLE * TESTED	* PURPOSE	* TEST	*MACH RANG	C* AGENCT	- PERSONNEL	
			<b></b>	<b>-</b>		
	MATO ORTATAL CONVE	OT#11287TDA&1	C+ 0 0175 /	*DUCKMELT \	*ป W CUMMINGS/RI	*DMS-DR-2431
AEDC - *TEST RESULTS FROM*OTS-T38526B62C12	M*IO UBIAIN CONVE	GI*MCAITIKAN ED#	* 0 0175 / *3 01 *	*AEDC -	*K.W NUTT/AEDC-VK	
SWTA - *THE NASA/ROCKELL +16W116E52V8R18F1	OTIVE HEAT-TRANSF	CK*	*4 02	*SUPERSONIC WIN		*MAY, 1980
V41A-W5 /*INTERNATIONAL SP +OT-T38B62C12M16W			** V2		*J E VAUGHN	*
IH85 *ACE SHUTTLE INTEG*16E52V8R18F10	+NS ON THE SPACE	_	<b>.</b>	*D IDMACE (W)	*G W KLUG	*
CR-151,798+RATED VEHICLE TES*	*HUTTLE INTEGRAT		*	* *	*-DMS	*
*T USING A 0.0175-*	*VEHICLE DURING		4 4	±	*	*
*SCALE MODEL (60-0*	*IMULATED FIRST		4.	7 1	···	*
*TS) CONDUCTED IN *	*D SECOND STAGE		* •	* *	sk	*
*THE AEDC-VKF TUNN*	*NDITIONS OF THE		*	- 1 - 1	•	*
*EL A (IHR5) *	*LIGHT PROFILE	*	7 3-	<i>∓</i>	*	at
* * * * * * * * * * * * * * * * * * *	* ************************************	* ^***********	C+ 0 0175 /	*DUCKME11 \	*J W.CUMMINGS/RI	*DMS-DR-2431
AEDC - *TEST RESULTS FROM*OTS-T38S26B62C12	MAIO OBIAIN CONVE	CITHEAITINAN	*3 O1 -	*AEDC -	*K W.NUTT/AEDC-VK	
SWTA - *THE NASA/ROCKELL *16W116E52V8R18F1	O*IVE HEAT-TRANSFI	EK*	*4 02	*SUPERSONIC WIN		*MAY. 1980
V41A-W5 /*INTERNATIONAL SP *OT-T38B62C12M16W			*4 02		+J E VAUGHN	*
IH85 *ACE SHUTTLE INTEG* 16E52V8R18F10	*NS ON THE SPACE		* -	*D TOMMEE (A)	*G W KLUG	*
CR-151,799*RATED VEHICLE TES*	*HUTTLE INTEGRATI		*		*-DMS	**
*T USING A 0 0175-*	*VEHICLE DURING		*	4 	*	*
*SCALE MODEL (60-0*	*IMULATED FIRST		*	r 4	*	*
*TS) CONDUCTED IN *	*D SECOND STAGE		*	4.		*
*THE AEDG-VKF TUNN*	*NDITIONS OF THE		*	4 4	 *	*
*EL A (IH85) *	*LIGHT PROFILE	*	*	* *	" *	*
*	*	* ************************************	 C O O175 /	*DOCKMELL /	*J.W CUMMINGS/RI	*DMS-DR-2431
.AEDC - *TEST RESULTS FROM*OTS-T38S26B62C12	MAID OBTAIN CONVE	CI*HEA1-IKAN	* 0.0175 / *3 01 -	*AEDC -	*K W NUTT/AEDC-VK	
SWTA - *THE NASA/ROCKELL *16W116E52V8R18F1	O*IVE HEAT-TRANSF	<b>ξΚ*</b> ••••	*4 02	*SUPERSONIC WIN		*APRIL. 1980
V41A-W5 /*INTERNATIONAL SP *OT-T38B62C12M16W			** 02		*J. E VAUGHN	*
IH85 +ACE SHUTTLE INTEG* 16E52V8R18F10	*NS ON THE SPACE	•	*	*D TOININGE (A)	*G W. KLUG	*
CR-151,800*RATED VEHICLE TES*	*HUTTLE INTEGRAT		*	*	*-DMS	*
*T USING A 0.0175-*	*VEHICLE DURING		4	, 	*	sk.
*SCALE MODEL (60-0*	*IMULATED FIRST		*	*	*	* ~~
*TS) CONDUCTED IN *	*D SECOND STAGE		<i>*</i>	* •	•	* 5 3
*THE AEDC-VKF TUNN*	*NDITIONS OF THE		*	т Ф	*	ORIGINAL OF POOR
*EL A (IH85) *	*LIGHT PROFILE	*	т ш	т ш	**	* 5
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		*			*			*		*MODEI	>		*	Ct	OGNIZANT	* BASI	C
TEST	•	*	*	CONFIGURAT	TONS *		TEST	*	TYPE OF			* TESTING	*	TE	ST DMS	*PUBLICA	TIONS
		* REPORT TITLE	*	TESTED			PURPOSE		TEST			* AGENCY	*	P	ERSONNEL	*OR COMM	IENTS
															<b></b>		0.400
.ARC		*INVESTIGATION O		V102 (105-0			TAIN LATE			* 1	0 02/ -				HAM PHILLIP		
IPWT	-	+LONGITUDINAL AN	) *			_	CTIONAL A			*		*LARC -			-LARC	*OCT.,	1981
243		+LATERAL-DIRECTI					C CHARAC			*		*UNITARY PLAN				τ •	
A125		*AL AERODYNAMIC					OF THE			*	,	*IND TUNNEL			KLUG	<u>.</u>	
R-160.1		*ARACTERISTICS F					OVER THE			*	,	<b>*</b>	*-D	MS		* *	
		*A 2 PERCENT (MO					3E 2 5 TC	14 *		*		*	*				
		*EL 105-0) SPACE			*5	5		*		*	,	*	*			T.	
		*HUTTLE ORBITER	•		*			+		*	,	*	*			*	
		*EHICLE 102) IN			*			*		*		*	*			<b>平</b>	
		*E LARC UPWT AT			*			+		*	;	*	*			<b>▼</b>	
		*CH NUMBERS FROM	2*		*			*		*	•	*	*			<b>本</b>	
		*.5 TO 4 5 (LA12	5)*		*			*		*	;	*	*			<b>∓</b>	
		*	*		*			*		*		*	* .			*	0.400
ISWC	-	*RESULTS OF TEST	S *C	0.02 SCALE D	RBITE*	ILATBO	N FORCE A	\ND ∗	FORCE	*13 1		*ROCKWELL/	-		DAILEDA/RO		
310		*USING A O 020-S								*13 5		*NSWC -			INTERNATIO		1978
1A 17 1		*LE MODEL (105-D								*		*	*Al			*	
CR-151.	764	*OF THE SPACE SH	UT * I	ED MODEL 89	)-O *F	SAUEC.	TORY REYN	10 L D *		*		*			WOODS, G.		
		*TLE VEHICLE ORB			*5	S NUM	BER AT A	\ MA*		*		*			BY, JR /LAF	C*	
		*ER IN THE NAVAL	S+		+(	CH NUI	MBER OF 1	14 A*		*		*			ERSEY	*	\ ear
		*URFACE WEAPONS	CE*		*1	OT ON	EXPAND 1	THE *		*		*			MCDONALD	*	\₽
		*NTER HYPERVELOC	IT*		*(	CURREI	NT DATA E	BASE*		*		*	<b>*</b> −£	OMS		*	
		*Y TUNNEL 9 (OA1	71*		*;	ABOVE	MACH 10	BUT*		*		*	*			*	10
		+)	*		*E	BELOW	THE FLIC	* TH		*		*	*			*	
		*	*		*(	CONDI	TIONS WHE	RE *		*		*	*			*	To G
		*	*		*(	DNSET	OF VISCO	บร *		*		*	*			*	//kg /
		*	*				ACIONS O			*		*	*			*	A.
		*	*			5.		*		*		*	*			*	A28
		*	+		*			*		*		*	*			*	35
AEDC	_	*RESULTS OF TEST	S *r	RBITER (47.	o) 0V*	TO DE	TERMINE A	ERO*	FORCE	*	0 03/	*ROCKWELL/	*R	. S S	PANGLER/RI	*DMS-DR-	-2434
PWT16T	-	*ON THE EFFECTS	OF * 1	102 WITH RIG	ID AN*	ELAST	IC EFFECT	rs o*	•	*0.8		*AEDC -	_		IOULIHAN/RI	*DEC ,	1979
507	1	*AEROELASTICITY	0 +1	FLEXIBLE T	AIL *	F THE	ORBITER	VER*		*1.55	i	*TRANSONIC P	ROP*D	WF	IERSEY	*	~~~
DA 129		*F THE SPACE SHU					TAIL ON			*		*ULSION WIND	TU*G	. W.	KLUG	*	- 1
		*LE ORBITER VERT					AL-DIREC			*		*NNEL (PWT-1	6T)+-I	OMS		*	ı
101,		*AL TAIL USING A					TABILITY			*		*	*			*	
		* O3-SCALE MODEL					CONTROL			*		*	*			*	
		*47-0) IN THE AE	•				ISTICS A			*		*	*			*	
		*-16T PROPULSION					AL TAIL 1			<b>+</b>		*	*			*	
						5.	ME IMAE I	-370*		*		*	*			*	
		*IND TUNNEL (OA1	491		•	J.		•					_			•	
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							WIND	TUNNEL TES	ST /	DMS DATA	PROCES	SSING	ì						;
TEST	 * *	RE	ר דאסקי	TITLE	*	CONFIGURATIONS TESTED	* * *	TEST PURPOSE	* + *	TYPE OF TEST	*MODEI * *MACH	SCAL				*	COGNIZANT TEST DMS PERSONNEL		BASIC BLICATION COMMEN
				· ·											. ,				
ERC	- *	BASE	PRESS	SURE AT	\D * I	NTEGRATED VEHIC	L*TO :	MEASURE HEA	\T T*F	PRESSURE	*0 022 *2 0	•	* * RE + L E	CKWEL	L/ -	_	W FOUST/RI W HERSEY	*UM:	S-DR-24: T . 19
OSWT						CONFIGURATION		SFER + PRES ISTRIBUTION			*2 U *3 5	_			O- EDOT		G MCDONALE		, ,
41	•		OF THE					T THE ORBIT			*				NIC WIN			*	
H39 R-151.			LE SPA					+ SRB AFTBO	-		*			TUNNE		*		*	
K-151,			MODEL					FACES DUE T			*		*	, 4, ,,,,	_	*		*	
			THE N	•	-		-	ET PLUME RE			*		*			*		*	
			ESEARC					ATION: THE			*		*			*		*	
		_	X 10-F0					LONG ŠIDE V			*		*			*		*	
		_	IC WIN				*S D	UE TO ROCKE	T-P*		+		*			*		*	
	+	ኒ (1	EST IF	139)	*		*LUM	E-INDUCED S	SEPA*		*		*			*		*	
	*	c			*			ION; + TO C			*		*			*		*	
	*	r			*			NE GAS RECO			*		*			*		*	
	+	•			*			EMPERATURES	*		*		*			*		*	
	*	*			*		*		*		*				,	* *J	W. BALL	7 D M	S-DR-24
4126			E SHUT				*		*		*		*L/	IKC	/	*-D			LUME 06
M-X			TRIMN				*	•	*		*						MO		GUST. 19
72661			F GRAV				* •		*		*		*			*		*	
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	*		31001		*		*		*		*		*			*		*	
SFC			ILTS OF	TRAN!	SO*N	ODEL 74-OTS	+DET	ERMINE AERO	DYN*F	FORCE	*0 60	-	*M5	SFC	1	*TH	OMAS E. LUNC	Y/L*DM	S-DR-24:
4TWT						ODEL 74-OTS WIT					<b>*4 96</b>		*M5	SFC	-	*MS	С	*FE	B, 19
52						RB. MOLD LINE C					*						L GLYNN	*	
A25			ONIC V			ANGES ON WING A					*		* [ (	WIND	TUNNE			*	
R-151,	766*	TUNN	EL ON	A 0 00	)4*D	NOSF		D LINE CHAN			*		*			*-D	MS	*	
	*	SCAL	E MODE	EL (74	- *N	ODEL 74-OTS WIT	H*, ₩	IRE BUNDLE	FAI*		*		*			*		*	
						RB MOLD LINE C			NGUL*		*		*			*		.t.	
				/EHICL		ANGES ON WING	*ARI	TY	*		*					*		·	$\circ$
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	WIND TUNNEL TEST / DMS DATA	PROCESSING	320
* *	* *	*MODEL * * COGNIZANT	* BASIC
TEST * * CONFIGURATIONS	* TEST * TYPE OF		*PUBLICATIONS
ID * REPORT TITLE * TESTED		*MACH RANGE* AGENCY * PERSONNEL	*OR COMMENTS
C - *RESULTS OF AN EXP*PROPOSED VEHICLE SWT - *ERIMENTAL INVESTI*5 6-1 /*GATION TO DETERMI*		+O O1 / *ROCKWELL/ *J MARROQUIN/RI	
*DOT LEG OF THE UN* *ITARY PLAN WIND T* *UNNEL *	* * * * * * * * * * * * * * * * * * * *	*	* * *
T ** C - *RESULTS OF AN EXP*PROPOSED VEHICLE SWT - *ERIMENTAL INVESTI+5 5-1 /*GATION TO DETERMI* 138 *NE ORBITER AND SO* -160,856*LID ROCKET BOOSTE* *R JET PLUME INDUC*	* * *TO OBTAIN PRESSUR*FORCE *E COEFFICIENT INC*PRESSURE *REMENTS DUE TO PL* *UME EFFECTS ON * *THE ORBITER, EXTE* *RNAL TANK, AND SR*	* * * * * * * * * * * * * * * * * * *	*VOLUME 02 *FEB., 1982 *
*ED EFFECTS UTILIZ*  *ING A O1-SCALE I*  *NTEGRATED VEHICLE*  *SPACE SHUTTLE MO *  *DEL (75-OTS) IN T*  *HE NASA/ARC 9X7 F*	*B, AND TO OBTAIN * *WING LOADS AND * *ELEVON HINGE MOME* *NTS * *	*	ORIGINAL OF POOR
*OOT LEG OF THE UN* *ITARY PLAN WIND T* *UNNEL	*	*	PAGE IS

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				*		*				*MODEL			*	COGNIZANT	* BAS	IC
TEST	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLIC	ATIONS
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	TEST	∗м∧сн	RANGE	* AGENCY	*	PERSONNEL	*OR COM	MENTS
ARC 975WT 246-1 [A138 CR-160,	- +  /+( +1 857+  +	ERIMENTAL GATION TO NE ORBITH LID ROCK! VET PLO	L INVES D DETER ER AND ET BOOS UME IND	TI*5 MI* SO* STE* OUC*		*E C *REN *UME *THE *RNA	DEFFICIENT INENTS DUE TO EFFECTS ON CORBITER, EX	NC*P PL* * .TE* SR*		*0 01 *1 55 *2 5 * *	<b>-</b>	*OT SUPERSO *WIND TUNNE *NITARY)	*D 7-F0*R. NIC *-D	MARROQUIN/RI W HERSEY H LINDAHL MS	*DMS-DR *VOLUME *FEB , *	03
		D EFFECT					AND TO OBTAI			*		*	*		*	
	*1	ING A .O ITEGRATEI SPACE SHI	VEHIC	CLE*			IG LOADS AND VON HINGE MO	* ME* *		*		* * *	*		*	
		DEL (75-0				*		*		*		*	*		*	
		HE NASA/				*		*		*		*	*		*	
		OT LEG (				*		*		*		*	*		*	
	*	TARY PLA	AN WIND	) T*		*		*		*		*	*		*	
	+(	JNNEL		*		*		*		*		*	*		*	
	*			+		*		*		*		*	*	<b>_ /_</b> _	*	
ERC	- *	BASE PRES	SSURE A	ND * S	PACE SHUTTLE PLU	J*TO	MEASURE HEAT	T*F	RESSURE	*0 022		+ROCKWELL/	_	W FOUST/RI QUAN/RI	*DMS-DR *FEB .	
OSWT					E SIMULATION (MO				IEAI - I RAN	*3.5		*LERC - *10 BY 10-F			*	157
44					EL 19-OTS)		ISTRIBUTIONS IT THE ORBITE			*3.5		*SUPERSONIC			*	
H83		SCALE SI					ERNAL TANK (			*		*D TUNNEL	*-D		*	
<- 151,		TLE PLUMI					+ SOLID ROCK			*		*	*		*	
		IN YAWI					STER (SRB) A			*		*	*		*	
		CONDITION					BODY SURFACE			*		*	*		*	_
		NASA-LI					TO ROCKET P			*		*	*		*	OF POOR
		)-FOOT S					RECIRCULATIO			*		*	*		*	
		IND TUN		*			MPINGEMENT.			*		+	*		*	Poor
	*			*		*T0	DERIVE GAS R	EC*		*		+	*		*	$\sim$
	*			*		*OVE	RY TEMP. IN	TH*		*		+	*		*	¥
	*			+		*E 6	BASE REGION U	SI*		*		*	*		*	
	*			*			GAS TEMP PR	OB*		*		+	*		+	Q:
	*			*		*E 1	REASUREMENTS	*		*		+	*		*	Wnd F
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			~~~~~~~~~~~	WIND TUNNEL	. TEST /	DMS DATA	PROCES	SING		322
TEST ID		ORT TITLE	CONFIGURATIONS TESTED	* 5 * TES * PURPO		TYPE OF TEST		* SCALE* TESTING RANGE* AGENCY	* COGNIZANT * TEST DMS * PERSONNEL	* BASIC *PUBLICATIONS *OR COMMENTS
OH79 CR-151,	* /*TRANS	FER TESTS 0 O 040-SCALE SHUTTLE OR BASE HEATIN EL (65-0) IN SC THERMAL M CHAMBER A.	* * * * * * * * *B75C16E64F16FR22	*ANSFER RAT *SCALED MOD *THE SPACE *ORBITER BA *ION WITH F *OCKET ENGI *E, DUPLICA *E PLUME FL *D TO SIMUL *IRCULATION *NGEMENT IN *NT * *******************************	HEAT TR*H TES ON A* DEL OF * SHUTTLE* SIRING R* TING TH* LOW FIEL* LATE REC* N + IMPI* N A NEAR* NVIRONME* FORCE A+P DATA ON+	EAT-TRANS		*USC - * * * * * * * * * * * * * * * * *	*J.W FOUST, P L *LEMOINE/RI, A L *BRANSCOMB/JSC *D.W HERSEY *G. R. LUTZ *-DMS * * * * * * * * * * * * * * * * * * *	*JUNE, 1979 * * * * * * * * * * * * *
IA183	*OF TH 488*TLE I *HICLE *16-FO *C PRO	E SPACE SHUT NTEGRATED VE IN THE AEDC OT TRANSONI PULSION WIND	*	*ENTS(ORBIT	FER, EXTE* , AND EA* ROCKET B* VING AND* FAIL * NGE MOME* BASE-BOD* STUFF DA* RIFICATI*		*****	*ULSION WIN	TU*D W HERSEY 1GT)*M M MANN *-DMS * * * * * * * * * * * * *	ORIGINAL PAGE IS

32		SING	PROCES	DMS DATA	т /	TUNNEL TEST	WIND	'					
* COGNIZANT * BASIC		*	*MODEL		*		*		*			*	
ING * TEST DMS *PUBLICATION	TESTING	SCALE*	*	TYPE DF	+	TEST	*	CONFIGURATIONS	*			*	TEST
CY * PERSONNEL *OR COMMENTS	AGENCY	RANGE+	*MACH	TEST	*	PURPOSE	*			T TITLE	REPOR		ID
,													
	OCKWELL/	~ +R	*O 2	RESSURE	E A+P	OBTAIN FORCE	:H*TO	375C16E64F16FR22H	*B7	OF TESTS	RESULTS	- *	oc oc
 *KWELL INTERNATION*VOLUME 02 	EDC -	* A	*16					G1M52N108N109N110					
NIC PROP*AL *APRIL, 198			*		EM *	VEHICLE EL	V+ALL	V111R20U1V27VT10V	*N1	(89-OTS)	MODEL	/*)
WIND TU*D.W HERSEY *	ULSION WIND	∗U	*		XTE*	S(ORBITER, E	*ENT	T11VT12VT13VT14	T*T1	SPACE SHUT	OF THE	*	83
PWT-16T)*M. M MANN *	INEL (PWT-1	*N	*		EA*	L TANK, AND	T*RNA	VT 15VT 16VT 17W131T	*V1	EGRATED VE	TLE INT	489*	160.
*-DMS *		*	*			SOLID ROCKE				THE AEDC			•
* *		*	*		*DNA	TER), WING				TRANSONI			
* *		*	*		*	TICAL TAIL				LSION WIND			
* *		*	*		S. *	D INDICATOR			*	(IA183)			
* *		*	*		IOME*	VON HINGE MO	*ELE		*			*	
* *		*	*			. AND BASE-			*			*	
*		*	*			AP PRESSURE			*			*	
* *		*	*			FOR VERIFICA	-		*			*	
*		*	*			OF TEST IA1			*			*	
*		*	*		*		+DAT		*				
*		*	+		*	_	*		*				
L/ *A J RITSCHEL/RI*DMS-DR-2449	OCKWELL/	- *R	*3 5	ORCE	02 *F	ORTAIN OV- 1/	•	SSV 14DA/B/C/R OR	1 + < <	DE A WIND	SECHI TO	_ +	;
- *I M. WEINBERG/RI*VOLUME 01	· · · · ·					TRIBUTED PRI				PRESSURE			WT
BY 7-FO*S. R. HOULIHAN *JUNE, 198	FOOT BY 7	+8	*			S. VEHICLE				EST OF THE			k-1
ERSONIC *J E. VAUGHN *			*			AND MOMENTS				ALE SPACE		•	46
JNNEL (U*-DMS *			*			VON HINGE M				ORBITER			–
• - •	IITARY)		*			. AND WING				47-0) IN T			107,
*	L (AKT)	*	*			IN THE HYPE				FOOT LEG O			
* +		*	···			FLOW REGION							
*		•	•			RETURN TO				ASA/ARC UN			
*			T 1						1 **	LAN WIND T			
		Ĭ	т т		., A* *	SITE (RTLS			*	JA146)	JNNEL (*	
* *		* *	*		*	ı	*BOR		*			*	
_L/ *A. J RITSCHEL/RI*DMS-DR-2445	OCKWELL/		* *3 5	ODCE	ላሳ ትር *	OBTAIN ON A			*	0F 4 MIN		*	_
				UKUE	ህሬ ቆኮ ድርርቱን	TOTALIN UV-1	/K*IU	SSV 14DA/B/C/R OR					2
- *I M WEINBERG/RI*VOLUME O2 BY 7-FO*S R. HOULIHAN *JUNE, 198 ERSONIC *J E. VAUGHN *	LEONT BY 7	πn *A	≁3 চ *	KESSUKE		TRIBUTED PRI				PRESSURE			SWT
DITTOTO R. HOULTHAN TOWNE, 190	T CHDEDON	±0	٠ -			S. VEHICLE				EST OF THE			3-1
INDIATO OF E. ANGUIN	II DUFEKSUN	* U t.i	* .t.			AND MOMENT				ALE SPACE			146
JNNEL (U*-DMS *			*			VON HINGE M				ORBITER			-167,
* *	IITARY)		*			, AND WING				47-0) IN T	•		
ж <u>т</u>		*	*			IN THE HYPE				FOOT LEG O			
* *		*	*			FLOW REGIO				ASA/ARC UN			
* *		*	*			RETURN TO			۲*	LAN WIND T			
* * .		*	*			SITE (RTLS			*	JA146)	JNNEL (*	
*		*	*		*	T	*BOR		*			*	
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					MILIAN) TUNNEL TES	٠,	UNIS DATA	PROCES	331NG				:
	,	 k			*		*		*MODEL	 L	*	*	COGNIZANT	* BASIC
TEST	k		,	* CONFIGURATIONS		TEST		TYPE OF			* TESTING		TEST DMS	*PUBLICATION
ID		REPORT TI	rle ,	* TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COMMEN
										<i>,</i>				. D
		FSPACE SHUTTI KN SKIN HEAT				'ERMINE AEROI IG AROUND PRO		RESSURE	* LARC		*RUCKWELL/		W. FOUST/RI W HERSEY	*DMS-DR-24 *VOLUME 01
		FER TESTS DI				RANCES AND IT			*5 3		*3.5-FOOT HY			*OCT , 19
151C		LATED LARGE				GATE TPS	4464		*		*SONIC WIND			*
		PROTUBERANCI				E HEATING R	 ΛΤΕ*		*		*NEL	*	und.	*
100,0		HALF SCALE				ISING A HALF			*		*	*		*
		ON FLAT PLAT			-	TILE ARRAY			*		*	*		*
		EL 58-OTS II	_		*	· · · · · · · · · · · · · · · · · · ·	*		*		*	*		*
		NASA AMES RI			*		*		*		*	*		*
		H CENTER 3			*		*		*		*	*		*
		YPERSONIC W	IND TU	*	*		*		*		*	*		*
	,	*NNEL (IH51C) .	*	*		*		*		*	*		*
	;	k .	•	*	*		*		*		*	*		*
C .	- •	SPACE SHUTTI	E THI	*	*DE1	TERMINE AERON	HEA*P	RESSURE	+ LARG	GE /	*ROCKWELL/	*ປ	w foust/RI	*DMS-DR-24
5HWT	- ,	N SKIN HEAT	TRANS	*	*TI	IG AROUND PRI	*uTu		*5.3	-	*ARC -	*D	.W HERSEY	*VOLUME O2
1	1	*FER TESTS OF	SIMU:	+	*BEF	RANCES AND II	NVE*		*5.3		*3.5-FOOT HY	PER*J	. E VAUGHN	*OCT , 1
15 fC	,	*LATED LARGE	SCALE:	*	*ST3	GATE TPS	*		*		*SONIC WIND	TUN*-	DMS	*
160,5	20,	*PROTUBERANC!	ES AND	*	*TIL	E HEATING R	ATE*		*		*NEL	*		*
		*HALF SCALE T				JSING A HALF			*		*	*		*
		ON FLAT PLAT			*ALE	TILE ARRAY	*		*		*	*		*
		EL 58-075 II			*		*		*		*	*		*
		NASA AMES RI			*		*		*		*	*		*
		H CENTER 3.			*		*		*		*	*		*
		*YPERSONIC W			*		*		*		*	*		*
	,	NNEL (IH51C) :	*	*		*		*		*	*		*
	*	k 		*	*	-4781 4 754110	*		*		***************************************	. T	n nunnouse/n T	*DUC_DD_04
				*EXTENAL OXYGEN				UKCE	* 0 4 * 1.5		*ROCKWELL/ *AEDC -		R BURROWS/R.I. J.SPURLIN/AEDC	
)5		SYSTEM ASCE		*DROGEN TANK FORI		E ASCENT AIR			* 1.5	5	*TRANSONIC P			*
132		FDATA SYSTEM				SYSTEM (AAD	_		<i>+</i>				B. MEINDERS	*
		BRATION TES				ESTIGATE AN			*		+NNEL (PWT-1			* ~ ~
-100,4		G THE 0 07-				RNATE AADS.			±		*	*	Diris	OF POOR
		EXTERNAL TAI				RM LIMITED T			*		*	*		* 2
		EBODY MODEL	*.			FLOW SURVEY			*		*	*		* '0'
) IN THE AEI			*	. 20,, 00,,,2,	*		*		*	*		* 2:
		16-FOOT TRAI			*		*		+		*	*		* 71
		C WIND TUNN			*		*		*		*	*		*
		*132)	\	*	*		*		*		*	*		* .0
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	WIND TUNNEL TEST /	DMS DATA	PROCESSING			325
**************************************			*MODEL	*	* COGNIZANT	* BASIC
* * * * * * * * * * * * * * * * * * * *	TECT	* * TYPE OF		E* TESTING	* TEST DMS	*PUBLICATIONS
TEST * * CONFIGURATION			*MACH RANG		* PERSONNEL	*OR COMMENTS
ID * REPORT TITLE * TESTED	* PURPOSE	* TEST	TMACH RANG	er Agenoi		
C - *EXPERIMENTAL RESU*	*TO VERIFY FLUTTER	*PRESSURE	+1 05 -	*ROCKWELL/	*R.B KINGSLAND, M	*DMS~DR-2450
TWT - *LTS OF TESTS TO D*	*PREDICTIONS MADE		*1 1	*ARC -	*A KOTCH/ROCKWELL	*MAY, 1979
1,154.1/*ETERMINE THE EFFE*	*FOR PANELS WITH		*	+2-FOOT BY 2-FO	O+D W HERSEY	*
/*CTS OF ORBITER TH*	*AND WITHOUT THERM		*	*OT TRANSONIC V		*
•	*AL PROTECTION MAT		*	*IND TUNNEL	*-DMS	*
	*ERIAL	•	*	*	*	*
	*CRIAC		·	*	*	*
12 *ILES ON PANEL FLU*	*	*		*	*	*
-151,774*TTER CONDUCTED IN*	** .t.	م	•	•	*	*
*THE ARC 2X2 TWT *	* .	л 	4		 	*
* * *	*	# #11564 45445	T-	*ROCKWELL/	*D W.HERSEY	*DMS-DR-2451
DC - *RESULTS OF BOUNDA*	*	*HEAT-TRANS		· ·	*G R. LUTZ	*MAY, 1979
TB - +RY LAYER TRANSITI+	*	*	*	Li Promini		*MA1, 1070
A /+ON TESTS OF THE O+	*	*	*	*HYPERSONIC WIN		* *
90A/MA29* 025-SCALE RIGHT-*	*	*	*	*D TUNNEL (B)	*	
-151,772*HAND WING AND TRU*	*	*	4	*	*	*
NCATED AFT FUSELA	*	*	*	*	*	*
GE MODEL (94-0) I	* •	+	*	*	*	*
*N THE AEDC HWTB *	*	*	*	*	*	*
*	*	*	*	*	*	*
C - *RESULTS OF HEAT T*SSV SRB NOSE	*TO DETERMINE THE	*HEAT-TRANS	S*O 10 /	*ROCKWELL/	*M QUAN/ROCKWELL	
5HWT - *RANSFER TESTS ON *	*HEAT TRANSFER RAT	*	* 53-	*ARC -	*C.L BERTHOLD/RO	C*SEPT , 1982
/*THE SPACE SHUTTLE*	*ES ON THE SPACE S	*	* 73	*3 5-FOOT HYPE	₹*KWELL	*
99 *FORWARD SRB SECT *	*HUTTLE SRB NOSE C		*	*SONIC WIND TUN	4*D W.HERSEY	*
-167,383*ION AT ASCENT CON*	*ONE IN THE VICINI		*	*NEL	*G R LUTZ	*
DITIONS USING THE	*TY OF THE FORWARD		*	*	*-DMS	*
+O.!O-SCALE MODEL *	*SEPARATION MOTOR		*	*	*	*
*98-S IN THE NASA *	+S AND AROUND SIMU		*	+	*	*
	*LATED RIVET HEADS		*		*	* 55
*/AMES 3 5-FOOT HW+	*LATED RIVET HEADS			*	*	*
*T (IH99) *					*	* ուԾ
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			*	WIND T	UNNEL TEST		DMC DATA	DDDCE	CINC					
				#114D 1				PROCES					32	.6
	*	*		*		*		*MODEL	_ *	•	*	COGNIZANT	* BASIC	
TEST		* CON	FIGURATIONS	*	TEST	*	TYPE OF		SCALE*	TESTING	*	TEST DMS	*PUBLICATION	IS
ID	* REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR COMMENTS	
			~											-
CALCDAN	d abter perceupt to	ID . 10 000												
LT	V - *BASE PRESSURE AN	VD * 19 - OT	5-B64,C16,E6	*TO ME	ASURE HEAT	IN*H	EAT~TRANS	*0.022	25 / *				\L*DMS-DR-2453	
	+HEAT TRANSFER TO	: *3,F14	,M18,N92,N94	*G RAT	ES AND PRE	SS*P	RESSURE			CALSPAN -	*SP		*JUNE, 197	9
IH75	/*STS OF THE 0.022	45*, V23,						*4 5	٠ ٠	LUDWIEG TUBE		W.HERSEY	*	
	*-SCALE SPACE SHU .776*TLE PLUME SIMULA				GAS RECOVE			*	*	•		R. LUTZ	*	
CK-151,					RATURES IN			*	*	•	*-D	MS	*	
	*ION MODEL (19~07				ASE REGION	-		*	*	•	*		*	
	*) IN THE NASA/CA				SCALED MOD			*	+	•	*		*	
	*SPAN LUDWIEG TUE	5 t *			E SPACE SH			*	*	•	*		*	
	*WIND TUNNEL	*			VEHICLE WI			*	*	•	*		*	
	*	*			ER + SRB F	_		*	*	•	*		*	
	*	*			ROCKET ENG			*	*		*		*	
	*	*			MULATING P			*	*	•	*		*	
	*	+			CIRCULATIO			*	*	•	*		*	
	*	*			INGEMENT I			+	*	t .	*		*	
	*	*		*AN AL	TITUDE ENV	IR*		*	*	t .	*		*	
	* -	*		*ONMEN	Τ.	*		*	*	•	*		*	٠
	*	*		*		*		*	*	4	*		*	
LARC	- *IMPACT OF RETROP	I * 140A/E	3 ORBITER-BA	*TO DI	SCOVER IF	TH*H	EAT-TRANS	*0.01	/ *	LARC /	*J.	C DUNAVANT/I	A*DMS-DR-2454	
CFHT	- *TS FOR CENTER-OF				ROFIT MODI			* 10 3	} *	·LARC -	*RC	·	*VOLUME 03	
114	/+GRAVITY EXTENSION	N*140A/8	3 ORBITER WI	*CATIO	NS, DEVELO	PE*		*	+	CONTINUOUS-FL	.b*O.	W BALL	*APRIL, 197	9
LA57	*ON ORBITER THERN	1 *TH S-:	2 FILLET	*D TO	INCREASE T	HE*		*	*	W HYPERSONIC	T+G	R. LUTZ	*	
TM-X	*AL PROTECTION SY	'S*140A/E	ORBITER WI	*ALLOW	ABLE C G.	R *		*		UNNEL	*-D		*	
72661	*TEM	*TH C-4	4 CANARD	*ANGE (OF THE ORB	IT*		*	+		*	· · -	*	
	*	*		*ER. W	OULD ADVER	SE*		*	*		*		*	
	*	*		*LY AFI	FECT THE T	PS∗		*	*		*		*	
	*	*		*ON THI	E ORBITER.	*		*	*	ı	*		*	
	*	*			TS SHOWED			*	*	:	*		*	
	*	*		*SIGNI	FICANT PRO	B *		*	+		*		*	
	*	*		*LEMS.		- *		*	*	:	*		*	
	*	*		*		*		*	*	•	*		*	
AEDC	- *RESULTS OF FLOW	A+140C (DRBITER WITH	*TO DE	TERMINE TH	E *H	EAT-TRANS	+0 017	5 / +	ROCKWELL/	* W	F. BRADDOCK/RI	*DMS-DR-2455	
HWTB	- *NGULARITY TESTS	O*SLAB S	SIDED VERTI	*FLOW I	DIRECTION	AT*		*8.0	•	AEDC -		E. VAUGHN	*JUNE, 1979	
418-65	/*N A O 0175-SCALE				ILTS LOCAT			*		HYPERSONIC WI	_		*	-
OH102A	*SPACE SHUTTLE OF				THE ORBIT			*		D TUNNEL (B)			*	
CR-151.	778*ITER MODEL (56-0				CAL TAIL L			*	+	0	*		*	
·	*ON THE AEDC VKF			*ADING		- *		+		ţ	*		*	
	*B HYPERSONIC WIN			*		*		*	*	i	*		*	
	*TUNNEL (OH102A	*		*		*		*	.,		*		*	
	+)	*		*		*		*			*		· •	
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		•				·			*	•	₹.		т	

– – –	_					WIND	TUNNEL TES	т /	DMS DATA	PROCE	SSING					327
		- <i></i> *		*		*		*		*MODE	 L	*	*	COGNIZANT		BASIC
TEST	٠.	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS		.ICATIONS
10		* REP	ORT TITL	.E *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR (COMMENTS
ARC	-	*RESUL	TS OF TE	STS +0	D.O3-SCALE SHUTTI	.*DIS	TRIBUTED CF	ON*F	ORCE	*0.03	,	*ROCKWELL/		H SPANGLER,		
97SWT					E INTEGRATED VEH				RESSURE	*1.55		*ARC -		DAILEDA/RI		JME 01
347-1					CLE 47-OTS		TS AFFECTED			*2 50		*9-FOOT BY				, 1980
IA184			IE SPACE				ON, WING L			*		*OT SUPERSO			**	
CR-160,			NTEGRATE				ATA, ORB F			*		*WIND TUNNE		MS	ж -	
			IN THE				A, ELEVON P			*		*NITARY)	*		AT.	
		-	RESEARC				DMENTS, FOL			*		*	*		*	
			9X7 FOOT			_	DNENT VT FO			*		*	TF.		- T	
			HC MIND	TUNN*			A SECONDAR			*		*	**		*	
		+EL (I	A184)	+			DATA ON SIN			¥		*	T		*	
		*		*			AADS PROE			* 		*	, ,			
		+		*			FED IN NOSE	: UF*		# 		*	.			
		*		*		*THE	El	*				*			*	
		* . D.C.O.U.	05 75	*		*******	COTOUTED OF) 0N+C	ODCE	*0 03	,	*RDCKWELL/	*D	H. SPANGLER.	J *DMS	DR-2456
ARC	-	*RESUL	TS OF TE	515 *	0 03-SCALE SHUTT	.*D12	IKIBULED CH	'UNTE	DECEMBE	*1 55	•	*ARC -		DAILEDA/RI		JME 02
97SWT					E INTEGRATED VEH		TS ARFECTED		KESSUKE	+2 50		*9-FOOT BY	-			, 1980
347-1	,				CLE 47-OTS		ON, WING L			*		*OT SUPERSO			*	,
IA 184			E SPACE				ATA, ORB F			*		*WIND TUNNE			*	
CR-160.			NTEGRATE				A, ELEVON H			*		*NITARY)	*		*	
			IN THE				DMENTS. FOL			*		*	*		*	
			9X7 FOOT				DNENT VT FO			*		*	*		*	
			IC MIND			_	SECONDAR			*		*	*		*	
			A184)	*			DATA ON SIM			*		*	*		*	2 2
		, C.	A 104)			_	AADS PROE			*		*	*		*	∵ਾੜ
		7 J		•			TED IN NOSE			*		*	*		*	~ ~ <u>~</u>
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					WIND	TUNNEL TES	T /	DMS DATA	PROCE	SSING						328
	*		*		*		*	·	*MODE	 L *	*	*	COGNIZANT	*	BASIC	 ;
TEST	*			CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS		BLICAT	
ID	* 	REPORT TITLE	E * 	TESTED	* 	PURPOSE	*	TEST	*MACH	RANGE*	* AGENCY	+	PERSONNEL	*OR	COMME	NTS
RC	- *R	ESULTS OF SHI	ITTI *F	XTERNAL OXYGEN H	I+ORT/	TN A LITCU	CIIDAE	ODCE	* 3.5		ROCKWELL/		nuncous /n *			
WT	- *E	TRANSPORTATI	ION *Y	DROGEN TANK FORE	*FDSC	NIC ASCENT	. A T ∗	UNCE	* 4.6				R BURROWS/R I.			,
67	/+5	YSTEM ASCENT	ATR*R			TA SYSTEM			* 4.0		*LARC - *UNITARY PLAN		CORLETTE/LARC	*MAI	RCH,	198
180		ATA SYSTEM HI				CALIBRATIO			τ Ψ		IND TUNNEL		B MEINDERS	<i>∓</i> •		
-160.8		UPERSONIC CAL				IN SHOCK D			Ψ.	,	TIND LOIMINET	*-DN		τ 		
- • -		ATION TEST US				NT DIAGNOS				- -	·	# - Dh	13	*		
		HE 0.07-SCALE				RMATION	*		*	4	r k	*		<u>.</u>		
		TERNAL OXYGEN			*	IN IN I TON	*			4	` k	Ĩ		*		
		ROGEN TANK FO			+		*		•	•		Ĩ		<u>.</u>		
		DY MODEL (68-			*		*		*	*	•			Ĩ.		
		N THE UNITARY			*		*		· •	4	•			- -		
	A	N HIGH SPEED	LEG		*		*		*	*	•	sk:		**		
	*0	F THE LARC 4X	(4 *		*		*		*	*	· •	*		*		
	*W	IND TUNNEL (I	*81A		*		*		*	*	k	*		*		
	*0)	*		*		*		*	*	r	*		*		
	*		*		*		*		*	*	k	*		*		
;	- *R	ESULTS OF SUP	ERS+E	T FOREBODY (T41)	*THE	TEST OBJEC	TIV*F	DRCE	* (0.07. *	*ROCKWELL/	*.1	GAWIENOWSKI.	.I∗DM!	S-DR-2	462
WT	~ *0	NIC ASCENT AI	R D*-	LOUVERS OPEN, O	*E WA	S TO OBTAI	N A*			0 36/ +			BROWNSON /ARC	_		
1-1	/*A	TA SYSTEM CAL	.IBR*T	FAIRING AND GO2	*SUPE	RSONIC CAL	IB *		*1 55		-		BURROWS, W.			
WT	- *A	TION TESTS IA	131*L	INE INSTALLED	*RATI	ON OF THE	ASC*		*3 5		OT SUPERSONIC			*	,	, ,
31B/C	*B.	C USING THE	0 0+E	T FOREBODY (T41)	*ENT	AIR DATA S	YST*		*		WIND TUNNEL (*		
167,3	70+7	-SCALE EXTERN	IAL +-	LOUVERS OPEN, C	*EMS	(AADS) THR	DUG*		*		NITARY)	∗G		*		
	*T	ANK FOREBODY	MOD*T	,FAIRING, AND GO	*H TH	E MACH RAN	GE *		*		8-FOOT BY 7-F			*		O
	*E	L 68-T IN THE	AR*2	LINE REMOVED	*OF 1	55 THROUGH	H 3*		*		OT SUPERSONIC		-	*		T
	*C	9X7 AND 8X7	LEG*E	T FOREBODY (T41)	*.5		*		*	*	WIND TUNNEL (U+		*		-
	S	OF THE AMES	UNI-	LOUVERS FILLED,	*		*		*		NITARY)	*		*		OF POOR
	+T	ARY PLAN WIND) TU*C	T, FAIRING AND	*		*		*	*	k	*		*		റ്
	*NI	NEL	*G	D2 LINE REMOVED	+		*		+	+	*	*		*		ž
	*		*R	DSEMONT STATIC P	*		*		*	+	k	*		*		
	+		*R	OBE (PR12) + 0.3	*		*		*	*	r	*		*		QUA
	*			SCALE FTP (PR4)			*		*	*	+	*		*		7
	+		*-	T41 OUT OF TUNN.	*		*		*	+	ŧ	*		*		A
	*		*		*		*		*	*	ŧ	*		*		TY

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						MIND	TUNNEL	TEST /	DMS I	ATAC	PROCES	SSING					32
	*			*		*		*			*MODEL	_ _	*	*	COGNIZANT	* B	ASIC
TEST	*			* (CONFIGURATIONS	*	TEST	*	TYP	E OF	*	SCALE	* TESTING	*			ICATIO
ID	* REI	PORT TI	TLE	*	TESTED	*	PURPOS	E *	TE	ST	*MACH	RANGE	* AGENCY	* 	PERSONNEL	*OR C	OMMENT
															OALUT PLIPLIPLIPLIPLIP	L-DMC-I	DD -046
C -	- ∗RESU	LTS OF	SUPERS	*ET	FOREBODY (T41)*THE	TEST OB	JECTIV*	FORCE				*ROCKWELL/	*J	. GAWIENOWSKI. BROWNSON /ARC		
					OUVERS OPEN.						* (o 3e\ →			R BURROWS, V		
					AIRING AND GO						*1 55				CARLSON /RI	**	1, 15
							ION OF T				*35				R HOULIHAN		
					FOREBODY (T41						*		*NITARY)		W KLUG	*	
- 167 .37	71*7-SC	ALE EXT	ERNAL	*-	OUVERS OPEN,	C*EMS	(AADS)	THRUUG*			*		*8-FOOT BY			·	
					AIRING, AND G						*		*8-FOU! B! FOT SUPERS!		CINIC	*	
					INE REMOVED		1 55 1 1 1 1	OUGH 3*			*		*WIND TUNN			*	
					FOREBODY (T41			*			*		*WIND TONN	*		*	
					OUVERS FILLED			*			*		**************************************	*		*	
			דע מאו		, FAIRING AND			*			<i>*</i>		*	*		*	
	*NNE L				LINE REMOVED			*			- T		T L	*		*	
	*				SEMONT STATIC			7			4	,		•		*	
	*				3E (PR12) + 0			*			- -			*		*	
	*				SCALE FTP (PR4			*			T	,	···	*		*	
	*			*- 4	11 OUT OF TUNN	*		*			T	,	r •	*		*	
	*				2C12ES2F10M16V	7 DATO	DETERMIN	T AEDO+1	UEAT-	TOANIC		3475/	*DUCKAEL1 \	+.1	W FOUST AND A	A C*DMS-I	DR-246
							AMIC HEA		HEN! -	IKAN	* 3 0	J 1 7 J 7 3	*AEDC -	* 1	MANSFIELD/RI	*VOLU	
					127 (56-0)		HE SPACE				* 8 (.W NUTT/VKFADE		
		RNOLD E					ORBITER				*		*D TUNNEL			*	- · •
184B		DEVELO					A EXTRAP				*		*		L MULKEY	*	
:-160,82		ER-VON I					R ANALYT				*		*		W. KLUG	*	
		LITY TU					ICTIONS				•		*		DMS	*	
		D B UTI					FEASIBLE				*		*	*	56	*	
		ACE SHU					OT EXIST				*	:	 *	*		*	
		ER THIN					OBTAIN L				*		k	*		*	0.0
		MOCOUPLI					AW DATA				-: **	,	· *	*		*	\mathcal{A}
		6-0, 60	- •				AW DATA N CONTIN				*		· *	+		*	
		-0 TES 0H 105					RT TRAJE				*		*	*		*	70 #
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TECT	*		*	CONE	TOUGATIONS	*	TECT	*	TVDE DE	*MODEL		* * TESTINO	*		GNIZANT		BASI BLICA	
TEST ID	* I	REPORT TITI	.E *		IGURATIONS TESTED	*	TEST PURPOSE	*	• • • • • •	*MACH	SCALE		*	_	T DMS RSONNEL	-	COMM	
					, 23120													
					ES2F 10M16V				EAT-TRANS						JST AND A			
		NSFER TEST		DW 127	•		MIC HEATI			* 3 01		*AEDC -			IELD/RI		LUME (
		ARNOLD EN					SPACE S			* 80		*HYPERSONIC W			TT/VKFADP	, A*AU	GUST,	198
84B		NG DEVELOP					BITER WH			*		*D TUNNEL (B)		-		*		
- 160,82		NTER-VON KA					EXTRAPOL			*		*	•		MULKEY	*		
		CILITY TUN					ANALYTIC			*		*		.W F	KLUG	*		
		AND B UTIL					TIONS WE			*		*	*-D	MS		*		
		SPACE SHUT					ASIBLE O			*		*	*			*		
		ITER THIN S	_				EXIST.			*		*	*			*		
		ERMOCOUPLE	-				STAIN LIM			*		*	*			*		
		56-0, 60-0					AN ATAG			*		*	*			*		
		33-0 TESTS					CONTINGE	-		*		*	*			*		
		3, O H 105,	TH-1*				TRAJECT			*		*	*			*		
	*02		*			*DATA		*		*		*	*			*		
	*		*			*		*		*	/	*	*		HOT AND A	*		2464
					ES2F 10M16V3				EAT-IRAN						UST AND A IELD/RI		LUME (
_	-	NSFER TEST)W127			MIC HEATI			* 3 01		*AEDC - *HYPERSONIC W						
	-	ARNOLD ENG					SPACE S			* 80		*D TUNNEL (B)			I I / VKFALP	'AYAU	idus i ,	190
34B		NG DEVELOP					RBITER WH			*		*U TOWNEL (B)			MULKEY			
- 160,83		TER-VON KA					EXTRAPOL			т ъ		<i>π</i>		W. 1		•		
		CILITY TUNK					ANALYTIC					T 1	*-D		KLUG	. T		
		AND B UTIL					CTIONS WE			* *		*	4 U	IM2		·		
		SPACE SHUTT					ASIBLE C					* •	_			Ţ		
		ITER THIN S	•				EXIST.					*				Ĩ.		유
		ERMOCOUPLE					STAIN LIN	-		ж		र •	ъ. Т					71 2
		56-0, 60-0	•				AA ATAD V			# 		#- 	- A-			-		~ບ :
		83-0 TESTS					CONTINGE	-		T.		* *	- -			<u>.</u>		Ŏ
		3, OH 105.	3H-1*				TRAJECT	IUKY *		*		*	- 7			- T		OF POOR
	*02		*			*DATA		*		7 		*	*			*		20
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					WIND	TUNNEL TES	T /	DMS DATA	PROCES	SSING			_		33
	··		*		*		*		*MODE!	 L	*	*	COGNIZANT	* B/	SIC
TEST	*		*	CONFIGURATIO	NS *	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBL:	CATION
ID.	* REPOR	RT TITL	E *	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*0R C0	OMMENTS
													. FOLICE AND	A GuDNC I	00-046
				62C12ES2F10M1				EAT-TRANS	5* O (0175/	*RUCKWELL/		/ FOUST AND / ANSFIELD/RI	A C*UMS−L VOLUM*	
#TB				W127 (56-0)		AMIC HEATIN			* 3 0	•	*AEDC -				
	/*HE ARNO					HE SPACE SH			* 81	-	*HYPERSONIC WI			•	31, 190
184B	*RING D	EVELOPMI	ENT *			ORBITER WHE			*		*D TUNNEL (B)	*EDC		*	
₹-160,8	31*CENTER					A EXTRAPOLA			*	;	*	-	L MULKEY	*	
	*FACILIT					R ANALYTICA			*	,	k		M KLUG	*	
	*A AND E	3 UTILI	ZIN *			ICTIONS WER			*		*	*-DN	15	*	
	G SPACE	E SHUTTI	LE O			FEASIBLE OR			*	!	*	*		*	
	*RBITER					OT EXIST. A			*		*	*		*	
	THERMO	COUPLE 1	MODE			DBTAIN LIMI			*	!	k	*		*	
	L\$ 56-0	0-00,	. AN		_	AW DATA AND			*		*	*		*	
	*D 83-0					1 CONTINGEN			*		*	*		*	
	84B, O	1 105, 3	IH-1		*ABO	RT TRAJECTO	RY *		+		*	*		*	
	+02		*		*DAT	4	*		+		*	*		*	
	*		+		*		*		*		*	*		*	
EDC	- *RESULTS	S OF HE	AT T+B	62C12E52F10M1	6R1*T0	DETERMINE A	ERO*H	EAT-TRANS	5* Q.	0175/	*ROCKWELL/		FOUST AND		
WTB	- *RANSFER	R TEST	IN T+8	V8W116T38S26					* 3 0		*AEDC -		NSFIELD/RI	*VOLUI	
11B-67	/+HE ARNO	DLD ENG:	INEE+0	(ס-(∗N TI	HE SPACE SH	IUTT*		* 8 (•	*HYPERSONIC_WI		•	P,A*AUGUS	51, 198
1105	*RING D	EVELOPMI	ENT *		*LE (DRBITER WHE	RE *		*		*D TUNNEL (B)			*	
R-160.8	32*CENTER	-VON KAI	RMAN*		+DAT	A EXTRAPOLA	*O1T		*		*		L. MULKEY	*	
	*FACILI	TY TUNNI	ELS *		*N 0	R ANALYTICA	L P*		*	,	*		W KLUG	*	
	*A AND E	3 UTILI	ZIN *		*RED	ICTIONS WER	E N*		*		*	*-DN	45	*	
	G SPACE	SHUTT!	LE 0		*OT	FEASIBLE OR	DI*		*		*	*		*	_
	*RBITER	THIN S	KIN *			OT EXIST A			*		*	*		*	OF POOR
	*THERMO	COUPLE 1	*# # # MODE		*T0 1	OBTAIN LIMI	TE *		*		*	*		*	••
	LS 56-0	0. 60-0	, AN		*D Y	AW DATA AND) OB*		*		*	*		*	ָ ס־
	D 83-0	TESTS	OH		*TAII	N CONTINGEN	1CY *		*		*	*		*	<u>o</u> :
	84B, O	1 105,	IH-1		*AB0	RT TRAJECTO)RY *		*		*	*		*	<u></u>
	*02		*		*DAT	4	*		*		*	*		*	-0 r
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						WIND 1	TUNNEL TE	ST / I	OMS DATA	PROCES	SSING					33
		*		*		*		*		*MODE!	 L *		*	COGNIZANT	* B	ASIC
TEST		+		* 0	CONFIGURATIONS	*	TEST	*	TYPE OF		_	TESTING		TEST DMS		ICATION
ID		* REPORT	TITLE	*	TESTED	*	PURPOSE	*				AGENCY	*	PERSONNEL		OMMENTS
EDC	_	*RESULTS C	OF HEAT T	[*B60	0010 (83-0)	***********	TERMINE	VEDU+H	PAT-TDANS	+ 0	D40/ +	ROCKWELL/	*.1 h	FOUST AND A	C*DMS-1	DD-2464
WTA		*RANSFER T					IC HEATI			* 3.0		AEDC -		NSFIELD/RI	+V0LU	
114-67		*HE ARNOLD		•			SPACE S			* 8.6				NUTT/VKFADP		
1102	•	*RING DEVE					BITER WH			*		D TUNNEL (A)			*	0.,
	833	*CENTER-VO					EXTRAPOL.			*	*			L MULKEY	*	
,		*FACILITY					ANALYTIC			*		•		W KLUG	yk.	
		*A AND B L					CTIONS WE			*			*-DN		*	
		*G SPACE S					ASIBLE O			•		•	UI	13	•	
		*RBITER TH					EXIST			*		•	<u>.</u>		*	
		*THERMOCOL				-	STAIN LIM			-	4		·			
		*LS 56-0.					V DATA AN	—		~ _		`	- T		-	
		*D 83-0 T					CONTINGE				-		- A		*	
		*84B, OH 1								*			*		*	
		*045, UH (105, IH-	<u>т</u>			TRAJECT			*	*	(*		*	
		*U2				*DATA		*		*	7	•	*		*	
_		*	-	*	~~	*		*	~	*	, , , , , , , , , , , , , , , , , , ,	,	*	***************************************	*	n n
C		*RESULTS C		_	- :						,	ROCKWELL/		MARROQUIN, R		
5HWT		*ERMODYNAM					HEAT TRAI			+5 25		ARC -		R. HOULIHAN	*AUGU	ST, 198
5	/	*TRANSFER					A ON THE			*5.25		3 5-FOOT HYP			*	
103		*O 0175-SC			,		ORBITER			+		SONIC WIND T	IUN*-DI	MS	*	
-160,	834	*ELS 60-0T					AND ON			+		NEL	*		*	
		*0/60T COV					ORBITER			*	4	k	*		*	
		*N THE NAS					, WING,			*	*	k	*		*	
		*ESEARCH C					TAIL, AN			*	1	•	*		*	
		*5-FOOT HY		_		*S POL	DURING	SECO*		*	*	•	*		*	
		*WIND TUNN	JEL (IH1	*		*ND ST	TAGE FLIG	HT *		*	Я	•	*		*	
		*03)		*		*		*		*	×	•	*		*	
		*		+		*		*		*	x	•	*		*	
IC .	-	*RESULTS C	OF A HEAT	r*or8	SITER	*T0 DE	TERMINE	AERO*HI	EAT-TRANS	*5 3	- *	ROCKWELL/	*\$.	R HOULIHAN	*DMS-	DR-2468
5HWT		*TRANSFER				*HEAT	ING ON TH	E OR*		*7 3	*	ARC -	*B.	J BURST	*JUNE	, 198
7	/	*RIES IN T	THE NASA,	/*		*BITE	TTTA TA S	TUDE*		*	×	3 5-FOOT HYF	PER*-DN	4S	*	
6	/	*ARC 3 5 F	OOT HYPE	₹*		*S VH	ERE DATA	DID *		*	4	SONIC WIND 1	run∗		*	~ ~
1105B		*RSONIC WI				*NOT E	XIST AND	WHE*		*	*	NEL	*		*	뒤뒤
184C		*L UTILIZI	NG SPACE	*		*RE DA	TA EXTRA	POLA+		*	k	•	*		*	
≀-167,	352	**SHUTTLE O	DRBITER	*		*TION	OF ANALY	TICA*		*	*	•	*		*	7 E
		*THIN-SKIN	1 THERMOO	*		*L PRE	DICTIONS	WAS*		*	k	•	*		*	<u>o</u> z
		*OUPLE MOD	ELS 60-0) *		*NOT F	EASIBLE	*		*	*	•	*		*	ORIGINAL OF POOR
		*AND 83-0(*		*		*	*		*		*	
		+H84C AND				*		*		*	×	k	*		*	O 77
		*	•	*		*		*		*	*	k	*		*	PAGE QUALI
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	WIND TUNNEL T	EST / DMS DATA PRO	CESSING		333
·	*	* * *MC	DEL *	* COGNIZAN	* BASIC
TEST * * CONFIG	URATIONS * TEST	* TYPE OF *	SCALE* TESTING	* TEST DMS	*PUBLICATIONS
. = = :	STED * PURPOSE	* TEST +MA	CH RANGE* AGENCY	* PERSONNEL	*OR COMMENTS
			no appoint t	* * * * * * * * * * * * * * * * * * *	FTE /0*DMC_DD_0460
RC - +SPACE SHUTTLE AFR*).80-	*I	TTE/R*DMS-DR-2469 *JUNE, 1982
TWT - *SI LARGE-SCALE DE*	*SCALE SPECIM *F ADVANCED FI			RANSO*R B. KINGSLAN	
03-1 /*VELOPMENT TEST US*	*F ADVANCED F			TUNNE+S R HOULIHA	
3302A *ING MODEL 117-0 S*	*CE INSULATIO		*L (UNITAR		
R-167,367+PECIMENS AND MODE* *L 96-0 TEST FIXTU*	*RSI) TO SSV	• • • • • • • • • • • • • • • • • • • •	*	*-DMS	*
RE IN THE AMES RE	*T AERODYNAMI		*	*	*
RE IN THE AMES RE *SEARCH CENTER 11X*	*SSURE GRADIE		*	*	* * *
11-FOOT TRANSONIC	*ADINGS & TUR		*	*	al-
**************************************	*CE LEVELS FO		*	*	*
*O2A) *	*E DURATIONS		*	*	*
* * *	+ALENT TO 100		*	*	*
*	*IONS WITH A		*	*	*
*	*ER OF FOUR (*	*	* *
*	*ISSIONS)	*	*	*	*
* *	*	* *	*	*	*
ARC - *RESULTS OF TESTS *LAUNCH V	EHICLE - *TO DETERMINE	PRES*PRESSURE * C	2 / *LARC /	' *W I SCALLION	N/LAR*DMS-DR-2471
STT - *ON A O2 SCALE SP*890TS	*SURE DISTRIB		1 - *LARC -	*C	*JAN., 1981
11 /*ACE SHUTTLE LAUNC*	*ALONG THE EX	TERN * *1	25 *16-FOOT T	RANSO+J E VAUGHN	*
132 *H VEHICLE MODEL (*	*AL TANK LOX	CABLE* *	*NIC TUNNE	L +C R EDWARDS	5 *
R-160.514+890TS) IN THE LAR*	*TRAY	* *	*	*-DMS	*
C 16-FT TRANSONIC	*	* *	*	*	*
*WIND TUNNEL TO D *	*	* *	*	*	+
ETERMINE PRESSURE	*	* *	*	*	*
*DISTRIBUTION ALO *	*	* *	*	*	*
NG THE EXTERNAL T	*	* *	*	*	*
ANK LOX CABLE TRA	* '	* *	*	*	*
*Y (LA132) *	*	* *	*	*	*
* *	*	* *	*	*	*
EDC - +RESULTS OF AN ORB*875C16E6			*ROCKWELL/		
VTA - *ITER SILTS POD HE*31V29	*RANSFER COEF		*AEDC -	*K W NUTT/ARO.	INC *MAY, 1980
118-65 /*AT TRANSFER AND F*875C16E6			= :	C WIN+J E. VAUGHN	*
1400 *LOW FIELD TEST US*31V31	*TAIL CONFIGU		*D TUNNEL		* *
R-160,494*ING A 0.0175-SCAL*	+N OF A SCALE	-	*	*-DMS	न •
E SPACE SHUTTLE O	*CE SHUTTLE O	RRITE* *	*	*	* *
RBITER(92-0) IN T	*R MODEL	* *	*	# 	*
HE AEDC VKF HYPER	*	* *	*	*	*
SONIC WIND TUNNEL	*	* *	*	*	*
+B (0H400) +	*	* *	₹ 	τ Ψ	**
* *	*	* *	*	Ψ	т-

	_				WIND	TUNNEL TE	ST /	DMS D	ATA	PROCES	SING					3	334
	×	*	+		*		*			*MODEL	. *		*	COGNIZANT	*	BASIC	
TEST	4	k	*	CONFIGURATIONS	*	TEST	*	TYPE	0F	*	SCALE*	TESTING	*	TEST DMS	*PUE	BLICATIO	INS
ID		REPORT TITLE	*	TESTED	* 	PURPOSE	*	TES	T 	*MACH	RANGE*	AGENCY	*	PERSONNEL	*OR	COMMENT	S
:C		ATRODYNAMIC LO	4 D.C + 7	TOO TILE OAVITY		>FTF========	5556	DDEC5111	n r			- POOKWELL /		D WINCEL AND	DT +D45	00-047	,,
TWT				PS TILE CAVITY OW FIELD MODEL					KE	*		*ROCKWELL/ *ARC -		B.KINGSLAND, E. VAUGHN		UME 01	3
2~1		LE SPACE SHUTT		.04 11660 110066		THE OML. T				*		2-FOOT BY 2-				1., 19	83
52		ORBITER TILE A				TTY AND ON				*		OT TRANSONIC			*		-
		Y MODEL (106-0				OF TILE SU				*		IND TUNNEL	*		*		
,		N THE NASA/ARC				NG CAVITY:				*	×	k	*		*		
		FOOT TRANSONIC				AIN PRES				*	*	k	*		*		
		ND TUNNEL (OA2				ONS DUE TO				*	k	k	*		*		
	4	· ·	+		*E HI	EIGHT MISM	ATCH*			*	*	,	*		*		
	*	۲	*		*,VAI	RIATIONS I	N GA*			*	*	۲	*		*		
	*	r	+		*P W	IDTH, AND	VARI*	ı		*	4	k	*		*		
	*	,	*		*ATI	ON IN RN/F	T AN+			+	4	¥	*		*		
	*	۲	*		*D B0	DUNDARY LA	YER *			*	*	ŧ	*		*		
	*	۲	*		*THI	CKNESS	*			*	4	+	*		*		
	*	ŧ	*		*		*			*	*	k	*		*		
				PS TILE CAVITY I					RE	*		rockwell/		B KINGSLAND			3
WT				OW FIELD MODEL						*		*ARC -		E VAUGHN		LUME 02	
- 1		LE SPACE SHUTT				THE OML, T				*		*2-FOOT BY 2			*140	V , 19	98
52		ORBITER TILE A		•		ITY AND ON	-			*		*OT TRANSONIO	C W*-D	MS	*		
167.		Y MODEL (106-0	•			OF TILE SU				*	*	*IND TUNNEL	*		*		
		N THE NASA/ARC				NG CAVITY:				*	*	k	*		*		
		FOOT TRANSONIC				AIN PRES				*	*	*	*		*		
	4	ND TUNNEL (OA2	52)*			ONS DUE TO				*	,	*	*		*		
	*	k	*			EIGHT MISM				*	3	*	*		*		
	×	k	*			RIATIONS I				*	,	* •	*		*		
	*	k	*			IDTH, AND				*	*	* 			*		
	4		*			ON IN RN/F				*	7	K	*		*		
	7		- T			BUNDARY LA	* HJ11			T		r •	ı.		*		
		•	- T		* 1171	CKNESS	•	,		* •		T 4	*		*		
C		⊧RESULTS OF TES		IDDITED ALONE	* DETI	ERMINE WAY	C TO	EUDUE		* .004	1 / 1	*MSFC /	*W	F BRADDOCK	/I MS*DM9	S-DR-247	74
WT				AUNCH CONFIGURA						*0.60	•	MSFC -	*C	I BRADDOOR,	100*	LY 19	
m 1				ON (NO PROTUBERA						* 1 25		*14-INCH TRIS	_	E VALIGHN	*	_,,	, ,
8		CH CONFIGURATI			*LOAI		* 1917			* 1 2.	_	*IC WIND TUN!			*		
_				AUNCH CONFIGURA						*		*	*-0		*		
.00,		THE NASA/MSFC				OBTAINED				*	,	*	*		*		
		*-INCH TRISONIC		.011	*EDC		4 I	ı		*	,	*	*		*		
		ND TUNNEL (FA2			*		*			*	,	*	*		*		
		k	., 							*					*		

											 -		 -				4510
	*			*		*	7507	*	TVDE OF	+MODE1	_	*	ECT THO	*	COGNIZANT TEST DMS	* 8	ASIC ICATIONS
TEST	*		TTT! -		CONFIGURATION TESTED	5 * *	TEST PURPOSE		TYPE OF TEST					*	PERSONNEL		OMMENTS
ID	*	REPURI	TITLE	* 	169160	~ 	PURPUSE	~ ~ ~ ~	1631	*MACH		- m					
		_ 															
RC	- *	PRESSURE	DISTRIB	U*LA	UNCH VEHICLE	(8*DET	ERMINE DETAI	LE*P	RESSURE	* 0 0	2 /	*LAR	- ,		SCALLION/LAR		
TT	- *	TION AND	INTEGRA	T*9-	OTS)	*D M	EASUREMENTS	OF*		* 0 9		*LAR	-		E VAUGHN	*AUGU	ST, 1980
2	-/+	ED LOADS	AT FOUR	*		*PRE	SSURES ON TH	€ *		* 1 2	-		FOOT TRANSC			*	
140		STATIONS				*LOX	SSURES ON TH FEEDLINE AT R STATIONS	*		*			TUNNEL	*-DM	S	*	
- 160,5	i09*	PACE SHU	TTLE TAN	<*		*FOU	R STATIONS	*		*		*		*		*	
	+	LOX FEED	LINE (LA	*		*		*		*	•	*		*		*	
	*	140)		*		*		*		*		*		*		*	
	*	•		*		*		*		*		*		*		*	
RC	- *	RESULTS	OF INVES	T+ORI	BITER 74-0	*T0	(1)DETERMINE	0 * F	ORCE		04 /		-		CALLOWAY/LA		
HT6	- *	IGATIONS	ON AN O	*		*RB I	TER DIRECTIO	VA*		*6 O		*LAR		*C		*JUNE	, 1981
46	/+	004-SCAL	E 140C M	D*			TABILITY AND			*6 O			INCH HYPERS			*	
141A/E	+	DIFIED C	ONF I GURA	Т*			ROL CHARACTE			*			C INNNEL (M			*	0.0
- 160,8	25*	ION SPAC	E SHUTTL	Ε*			CS FROM 20-4			*		*ACH	6)	*-DM	5	*	Ti A
	*	VEHICLE	ORBITER	*			LE OF ATTACK			*		*		*		*	OF POOR
		MODEL (7					TEST ANGLES			*		*		*		*	7 2
	*	HE NASA/	LANGLEY	₹*			ACK AND SIDE			*		*		*		*	אַ≷
	*	ESEARCH	CENTER 2	*C			FOR CONTING			*	!	*		*		*	
		-INCH MA		// *			ABORT, (3)TE			*	•	*		*		*	
	*	EL (LA14	1)	*			LL NEGATIVE			*		*		*		*	PAGE QUALI
	*			*			E OF ATTACK			*		*		*		*	⊊ ⊋
	*			*			MENTS TO VER			*		*		*		*	
	*			*			THER RESULTS			*		*		*		*	
	*			*		•	ALIDATE MACH	=6*		*		*		*		*	₹ ₹
	*			*		*DAT	A	*		*		*		*		*	- 63
	*			*		*		*		*	,	*	_ ,	*		*	DD -0470
RC	- +	HIGH SUP	ERSONIC	R*87	5C16E64F16FR2	2H*THE	TEST OBJECT	1 V * F	ORCE	*	0 2/		- •		NARD SPENCER	י-כויוט∗ט VOLUI	
					M52N108N109N1					_		*LAR			LARC		
99							RUDDER EFFE			* 5 4					RGE M. WARE/L	4 * 4000	51, 1980
131	+	SILTS PO	D ON A O	. *VT	10VT 11VT 12VT 1	3V+TIV	ENESS, DETER	MI*		*		* Ì ND	TUNNEL	*RC	W. KLUG	*	
:-160,5					4VT 15VT 16VT 17					*		*		* - DM		±	
		Y DRIVEN					N FILLED AND			*		<i>₹</i>		* - [][[]	3	±	
		SURFACE)					ED OPEN SPEE			*		*		-# 		*	
		6-0 SPAC					E, DETERMINE			र -⊩		* -					
		ORBITER					CT OF SILTS			*		* -		*		- 7	
		N THE NA					N AERD CHAR			*		↑		T 4		., sh	
		-FOOT UN					HE ORBITER,			*		π		**		→	
		N WIND T	UNNEL (L	A*			EMENT CONTRO			ポ *		л ъ		٠ •		*	
	*	131)		*			ECTIVENESS D	AIY		*		7 4		٠ ب			
	*			*		*A		*		*		<i>∓</i>		بد ب		*	
	*			*		*		*		*		*		*		~	

	-								TOMME	. E5		DMS DATA	PRUCE	.551NG						330
		*			*			*			*		*MODE	L	*		*	COGNIZANT	*	BASIC
TEST		*			* C	ONFIGL	JRATIONS	*	TES	ST.	*	TYPE OF	*	SCALI	* TE	STING	*	TEST DMS	*PUE	BLICATIONS
ID		* RE	PORT TI	TLE	*	TES	STED	*	PURPO	JSE	*	TEST	*MACH	RANG	* A(BENCY	*	PERSONNEL		COMMENTS
·																				
ARC PWT	-	*HIGH	SUPERS	ONIC	≀*B75	C16E64	F 16FR22	H*THE	TEST C	BUECTI	V*F	ORCE	*	0 2/		•		RNARD SPENCER	₹ J*DMS	S-DR-2478
W I 199	Ξ,	*******	R EFFEC	ITAFU	: * G 1 M	520108	N 109N 1 1							· -	*LARC			/LARC		.UME 02
	/	*22 A	ND EFFE	CIUF	*N11	1R20V2	.7	*ORB	RUDDER	? EFFEC	*							ORGE M. WARE/	/LA*AUG	SUST, 1980
1131	-04	*21F1	S POD O	N A U.	*VII	001110	1127113	V*TIV	ENESS,	DETERM	II *		*			TUNNEL	*RC		*	
(- 1 0 0,5	004	*20-5	CALE (R	EMUIEL	. 114	V I 15V I	16VI 17W						*		*			W. KLUG	*	
			IVEN CO						N FILLE				*		*		*-D	MS	*	
			ACE) MOI						ED OPEN				*		*		*		*	
			SPACE SI		_				E, DETE		_		*		*		*		*	
			TER TES						CT OF S				*		4		*		*	
			E NASA/						N AERO				*		*		*		*	
			T UNITA						HE ORBI				*		*		*		*	
		*131)	ND TUNN	CL (L#	1.7				EMENT C				*		*		*		*	
		* 131)							ECTIVEN	IESS DA	T*		*		*		*		*	
		~ .⊾			*			*A			*		*		*		*		*	
ARC		** *************			*			*			*		*		*		*		*	
PWT	~	*M1GH	SUPERSO	ONIC H	*875	C16E64	F 16FR22	H*THE	TEST C	BUECTI	V*F	ORCE	*	0.2/		•		RNARD SPENCER	≀ J*DMS	-DR-2478
299	- /	******	R EFFEC	IIVENE	*G1M	52N108	M109N11							-	*LARC			/LARC		.UME O3
299 A131			ND EFFE					*ORB	RUDDER	EFFEC	*		+5 4					ORGE M. WARE/	/LA*AU @	SUST, 1980
	. ~ -	*5161	S POD O	NAO	*VT10	3VT 1 1V	T 12VT 13	V*TIV	ENESS,	DETERM	1*		*		*IND	TUNNEL	*RC		*	
K - 160,5	ໜ	*20-5	CALE (RI	EMULEL	*!14	V I 15VT	16VT17W						*		*			W. KLUG	*	
			IVEN CO						V FILLE				*		*		*-DI	MS	*	
			ACE) MOI						ED OPEN		_		*		*		*		*	
			SPACE SI						E, DETE		-		*		*		*		*	
			TER TES						CT OF S				*		*		*		*	
			E NASA/						V AERO				*		*		*		*	
			T UNITA						IE ORBI				*		*		*		*	
			ND TUNNI	EL (LA	*				EMENT C				*		*		*		*	
	,	*131)			+				ECTIVEN	IESS DA	T *		*		*		*		*	
	,	*			*			*A			*		*		*		*		*	
~=~	•	*	. 		*			*			*		*		4		*		*	
SFC	- '	*RESUI	LTS OF 1	TESTS	*OTS	(MODE	L 74)		DETERMI			ORCE	*0 00	4 /	*ROCK	WELL/	*4	E. VAUGHN	*DMS	-DR-2481
	- ,	*IN T	HE NASA,	MSFC	*OTS	+ LBM		*EMEN	NTAL AE	RODYNA	M*		*0 60	-	*MSFC	-	*G	R LUTZ	∗ปบเ	IE, 1983
35	1.	* 14 - II	NCH TRIS	SONIC	*OTS	+ LBM	+ FAIR	I*IC (LOADS W	4 HTI	₩+		*4.96		*14-1	NCH TRIS	ON*-DI	MS	*	
1602			TUNNEL					*ITHO	OUT THE	THRUS	T*		*		*IC W	IND TUNN	EL*		*	
≺- 167.3			4-SCALE				+ WAX						*		*		*		*	
			OTS) THE			ING			BY TH				*		*		*		*	
			ENTED SE					*D B0	OST MO	DULE.	*		*		*		*		*	
			LE INTE					*			*		*		*		*		*	
	•	+VEHI	CLE (IA	502)	*			*			*		*		*		*		*	

						WIND	TUNNEL TEST	/	DMS DATA	PROCES	SING					33
		*				*		*		*MODEL		*	*	COGNIZANT	* BAS	SIC
TEST		*		k	 CONFIGURATION 	ls *	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBLIC	
ID		*	REPORT TI	TLE ×	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COM	MENT
RC	_	*RI	ESULTS OF	TESTS ×	*ORBITER ~ 470	*T0	OBTAIN AIRLO	AD*F	ORCE	* 03	1	*ROCKWELL/		SPANGLER AND		
TWT			OR FORCE.				NFORMATION W			* 6	-	*ARC -	*	KANEVSKY/R.I	*VOLUME	01
7-1			PRESSURE				ND WITHOUT S			*14		*11-F00T TR/	\NSO*S	R HOULIHAN	, NAU*	19
7-2			DELASTIC D			*TS	POD, OBTAIN	DV*		*		*NIC WIND TO	JNNE *C	. R EDWARDS	*	
400			NG THE O O				WING DISTRI			*		*L (UNITARY)	*-1	DMS	*	
	814		E PRESSURE			*TED	AIRLOADS, D	BT*		*		*	*		*	
,	•		PACE SHUTT	_			ELEVON DIST			*		*	*		*	
			ITER MODEL			*BUT	ED AIRLOADS	AN*		*		*	*		*	
			IN THE NA			*D H	INGE MOMENTS	. *		*		*	*		*	
		•	1 FOOT UNI			*AND	TO DETERMIN	Ė *		*		*	+		*	
		-	LAN WIND T			*EFF	ECT OF VERTI-	CA*		*		*	*		*	
			DA400)	-	*	+L T	AIL AEROELAS	TI*		*		*	*		*	
		+ `		k	+	*CIT	Y ON LATERAL	-D+		*		*	*		*	
		*		ż	*	+IRE	CTIONAL CHAR	AC*		*		*	*		*	
		*		×	*	*TER	ISTICS OF TH	E *		*		*	*		*	
		*		×	*	*ORB	ITER VEHICLE	*		*		*	*		*	
		*		×	+	*		*	,	*		*	*		*	
С	-	+RI	ESULTS OF	TESTS *	*ORBITER - 470	*TO	OBTAIN AIRLO	AD*F	ORCE	* 03	/	*ROCKWELL/	*R			
TWT	_	*F	OR FORCE,	MOMENT*	+	*S I	NFORMATION W	IT*P	RESSURE	* 6	-	*ARC -		KANEVSKY/R I.		
7-1		/*.	PRESSURE	AND AE	*	*H A	ND WITHOUT S	IL+		+1.4				R. HOULIHAN	∗JAN ,	19
7-2		/*R	DELASTIC D	ATA US	*	*TS	POD, OBTAIN	٧V.		*		*NIC WIND TO		. R EDWARDS	*	
400		*I	NG THE O.O	30 SCA	*	*102	WING DISTRI	BU*		*		*L (UNITARY)	*-1	DMS	*	
- 160.	81	5*L1	E PRESSURE	LOADS	k	*TED	AIRLOADS, O	BT*		*		*	*		*	
		* SI	PACE SHUTT	LE OR	*	*AIN	ELEVON DIST	RI*		*		+	*		*	
		*B	ITER MODEL	. (47-0	*	+BUT	ED AIRLOADS	ΔN∗		*		*	*		*	
		*(IN THE NA	SA/ARC	*	+D H	INGE MOMENTS	, *		*		*	*		*	
		*1	1 FOOT UNI	TARY	*	*AND	TO DETERMIN	E *		*		*	*		*	유
		*P	LAN WIND T	UNNEL,	*	*EFF	ECT OF VERTI	CA*		*		*	*		*	•••
		*(1	DA400)	,	*	*L T	AIL AEROELAS	TI*		*		*	*		*	POO
		*		,	*	*CIT	Y ON LATERAL	-D*		*		*	*		*	0
		+		,	*	*IRE	CTIONAL CHAR	AC*		*		*	*		*	POOR
		*		•	•	*TER	ISTICS OF TH	E *		*		*	*		*	Ž
		*		د	*	*ORB	ITER VEHICLE	*		*		*	*		*	Ô
		*		,	*	*		*		*		*	*		*	QUALI
																QUA
																3 ,

5

	WIND TUNNEL TEST / DMS [ATA PROCESSING	338
* *	* *	*MODEL * * COGNIZAN	NT * BASIC
TEST * * CONFIG	SURATIONS * TEST * TYPE	OF * SCALE+ TESTING * TEST DMS	
	STED * PURPOSE * TES		
C - *RESULTS OF TESTS *ORBITER			AND A*DMS-DR-2482
TWT - *FOR FORCE, MOMENT*	*S INFORMATION WIT*PRESSU		
7-1 /*, PRESSURE AND AE*	*H AND WITHOUT SIL*	*1 4 *11-FOOT TRANSO*S R HOULIN	
7-2 /*ROELASTIC DATA US*	*TS POD, DBTAIN DV*	* *NIC WIND TUNNE*C. R EDWARE)S *
400 +ING THE 0 030 SCA*	*102 WING DISTRIBU*	* *L (UNITARY) *-DMS	*
-160,816+LE PRESSURE LOADS+	*TED AIRLOADS, OBT*	* *	*
*SPACE SHUTTLE OR *	*AIN ELEVON DISTRI*	* *	* *
BITER MODEL (47-0	*BUTED AIRLOADS AN*	* *	*
(IN THE NASA/ARC	*D HINGE MOMENTS. *	* *	* * * * *
*11 FOOT UNITARY *	*AND TO DETERMINE *	* *	*
PLAN WIND TUNNEL.	*EFFECT OF VERTICA*	+ * *	*
*(QA400) *	*L TAIL AEROELASTI*	* *	*
* *	*CITY ON LATERAL-D*	* * *	*
*	*IRECTIONAL CHARAC*	* *	* (
* *	*TERISTICS OF THE *	* * *	*
* *	*ORBITER VEHICLE *	* *	*
•	* *	* *	•
DC - *RESULTS OF A TEST*	*TO CERTIFY THE TP*FORCE	*1 0 / *ROCKWELL/ *S C CARRID	N/RI *DMS-DR-2483
T16T - *OF THE FULL-SCAL *	*S TILES COVERING *	* 0.80- *AEDC - *C L. STEVEN	S/RI *VOLUME 01
-556 /*E NASA ORBITER VE*	*THE FIN/RUDDER GA*	* 1.40 *TRANSONIC PROP*S R HOULI	-, -,-
	· ·	* *ULSION WIND TU+G R LUTZ	TAIN TOOKE, IDOX
49 *RTICAL TAIL (MODE*	*P REGION OF THE N*	* ************************************	2
-167,357*L 111-0) IN THE A*	*ASA ORBITER VERTI*	* *NMEL (PWI-101)*-UMS	*
EDC 16 FOOT PROPU	*CAL TAIL. *	* *	*
LSION WIND TUNNEL	* *	* *	*
*(OS49) *	*	* *	*
* *	* *	* *	*
DC - *RESULTS OF A TEST*	*TO CERTIFY THE TP*FORCE	*1 0 / *ROCKWELL/ *S C. CARRID	
T16T - *OF THE FULL-SCAL *	*S TILES COVERING *	* O 80- *AEDC - *C L. STEVEN	- ·
-556 /*E NASA ORBITER VE*	*THE FIN/RUDDER GA*	* 1 40 *TRANSONIC PROP*S R. HOULI	HAN *JUNE, 1982
49 *RTICAL TAIL (MODE*	*P REGION OF THE N*	* *ULSION WIND TU*G R. LUTZ	*
-167,358*L 111-0) IN THE A*	*ASA ORBITER VERTI*	* *NNEL (PWT-16T)*-DMS	*
EDC 16 FOOT PROPU	*CAL TA269 *	* *	*
LSION WIND TUNNEL	* *	* *	*
*(0S49) *	* *	* *	*
. (4444)	* *	* *	*

						WIND	TUNNEL TEST	1	DMS	DATA	PROCES	SSING						33
	*					*		*			*MODEL		*		*	COGNIZANT	* B/	SIC
TEST	*			*	CONFIGURATIONS	*	TEST	*	ΤY	PE OF	*	SCALE	* T	ESTING	*	TEST DMS		CATION
ID	*	REPORT	TITLE	*	TESTED	*	PURPOSE	*	T	ΓEST	*MACH	RANG	* 1	GENCY	*	PERSONNEL	*OR C	MMENTS
~			-					- -										
RC	*1	RESULTS	OF VENT	P*CA	LIBRATION PANE						*FULL	•		KWELL/		B KINGSLAND		
1TWT	- *(ORT TPS	LOADS TI	S*HR	SI PANEL	_	ISTRIBUTION		FORC	Œ	•	-	*ARC			CKWELL	*JUNE	198
25	/*	TS IN TH	E AMES F	?E+FR	SI PANEL		MATERIAL AF				+1.4					R. HOULIHAN	*	
25-1	/*:	SEARCH C	ENTER (A	\R*		*UND	VENT PORTS	W/*			*					J. BURST	*	
S50	*	C) 11X11	-FOOT W:	IN*			W/O JET MAS				*		*L (UNITARY)	*-[DMS	*	
550A	*	TUNNEL	USING 1	# O#			#, AND TO CE				*		*		*		*	
₹-167,	361*1	DEL 113-	0 (0550,	/o*			Y HRSI TILES				*		4		*		*	
	+ 1	550A)		*		*ND I	FRSI TO 1.4	T1*			*		*		*		*	
	*			*		*MES	DESIGN DYNA	MI*			*		*		*		*	
	*			*			RESSURES (UL	IM+			*		*		*		*	
	*			*		*ATE) AIRLOADS	*			*		*		*		*	
	*			*		*		*			*		*		*		*	
DC	- ∗	RESULTS	OF WIND	T*B6	4C14E63F14M18N	9 OT*E	DETERMINE TH	IE *F	PRES	SSURE	*0 035	,		KWELL/		A BLACK/ARVI		
VT 16T	- *1	JNNEL TE	ST 0A253	3 *2N	94R18U2V23W129	*STA	TIC & FLUCTU	JAT*			* 0 6	3 -	*AED			ALSPAN	*VOLUI	
2			EDC 16-7				PRESSURE EN				* 1.50)				R. BURROWS/RI		198
1253	*	PROPULSI	DNIW NO	T*T4	0	*RON	MENT FOR CER	*ITS			*					R HOULIHAN	*	
₹-167.	368*1	JNNEL US	ING A O.	.0*		*FYI	VG THERMAL F	*0N			*		*NNE	L (PWT-16			*	
			SS LAU			*TEC	TION SYSTEM	(T*			*		*		*-[DMS	*	
	*	1 VEHICL	E MODEL	8*		*PS)	TILES IN CO	*TN			*		*		*		*	
	.	4-OTS &	ENTRY VI	EH		*ROL	SURFACE GAR	95 *			*		*		*		*	
	*	ICLE MOD	EL 84-0	*		*0N '	THE WING & \	ER+			*		*		*		*	
	*			*		*TIC	AL TAIL, & 1	· 0			*		*		*		*	
	*			*		*PRO	VIDE STATIC	PR*			*		*		*		*	99
	*	-		*		*ESSI	URE DATA FOR	*A			*		*		*		*	<u>س</u> س
	*			*		*IRL	DADS ANALYSI	S *			*		*		*		*	a n <u>0</u>
	*			*		*OF 1	WINDSHIELD,	LE+			*		*		*		*	o罗
	*			*		*VON	/WING TIP,E	rc *			*		*		*		*	ΟŒ
	*			*		*	,	*			*		*		*		*	ORIGINAL OF POOR
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			. 		WIND '	TUNNEL TEST	/	DMS DATA	PROCES	SING						34
	*		*		*		*		*MODEL		*	*	COGNIZANT	*	BASI	
TEST	*		* CON	VFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	+ TESTING	*			BLICA	
ID 	*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL		COMM	
С	_ +1	DECINITE OF WIND 1	F#B6404	1 4 E C D E 4 4 M 4 O N /	1+TO 0					. ,						
_	_ +1	RESULTS OF WIND I	*B0401	14E63F14M18NS	9* IU UI	FIERWINE 1H	. *P	RESSURE			*ROCKWELL/		A BLACK/ARVIN			
101		JNNEL TEST 0A253 IN THE AEDC 16-T	*211944	(1802753#159					* 0 6		*AEDC ~		LSPAN		LUME	
53		PROPULSION WIND 1				PRESSURE EN			* 1 5C				R. BURROWS/RI	*0C	т.,	19
		JNNEL USING A O (ENT FOR CER			*		*ULSION WIND T			*		
107,3						3 THERMAL PI			*		+NNEL (PWT-16T	-		*		
		35-SCALE SS LAUNG				ION SYSTEM			*		*	*-D	MS	*		
		VEHICLE MODEL 8				TILES IN CO			+		*	*		*		
		4-OTS & ENTRY VEH				SURFACE GAPS			*		*	*		*		
	*]	ICLE MODEL 84-0	*		*ON TH	1E WING & VI	ER*		+		+	*		*		
	*		*		*TICAL	L TAIL, & TO) *		*		*	*		*		
	*		*		*PROV	IDE STATIC F	>K*		*		*	*		*		
	*		*			RE DATA FOR			*		*	*		*		
	*		*		*IRLO/	ADS ANALYSIS	5 *		*		*	*		*		
	*		*			INDSHIELD, EL			*		*	*		*		
	*		*		*VON/V	VING TIP.ETO	. *		*		*	*		*		
	*		*		*		*		*		*	*		*		
	- *1	RESULTS OF AMES G	*HRSI	TILED PANEL	*TO DE	MONSTRATE 1	гн*Р	RESSURE	* 70)-	*ROCKWELL/	*D I	B. KINGSLAND/R	Nacia	S-DD-	-249
VΤ	- */	AP FILLER TESTS L	! *			E TILES AND			* 88		*ARC -		WELL		T ,	
- 1		SING TEST FIXTURE		,					*		*11-FOOT TRANS			700	٠,	
1.3		96-0 IN THE NASA				ATTACHED TO			Ţ		*NIC WIND TUNN			*		
3	•	AMES 11X11-FOOT				RUCTURE UNI			- -					*		
1		TUNNEL (0543.0551				MULATED FLIC			<i>∓</i>		*C (UNITARY)	*-DI	AI2	*		
1B		OS51B.OS51C)	- L				3H₹		*		*	*		*		
ic	*		T.		* ENV	/IRONMENTS	*		*		*	*		*		
167.3			4 .L.		*		*		*		*	*		*		
107,3	- TO 2				*		*		*		*	*		*		
	.4. 6	DEL THEFTHEN CORE	*		*		*		*		*	*		*		
		RELIMINARY SCREE				R INFORMATI		RESSURE			*ROCKWELL/		B. KINGSLAND,	J*DM	S-DR-	248
VΤ	- *	VING TESTS OF THE	+CALIB						* 1 4		*ARC -		GEE, RI	*SE	РТ.,	- 19
~~		SPACE SHUTTLE AF				TION OF AFRS			*		*2-F00T BY 2-F			*		
00		RSI MATERIAL USIN				KET CONFIGUE			*		*OT TRANSONIC	₩*B.	J BURST	*		
160,8		MODEL 115-0 IN				N SUITABLE F			*		*IND TUNNEL	*-D!	MS	*		
		THE NASA/AMES RES			*R SUE	BSEQUENT MAT	ΓE*		*		*	*		*		
		EARCH CENTER 2X2			*RIAL	CHARACTERIZ	ZΛ*		*		*	*		*		
		FOOT TRANSONIC WI			*TION	AND SYSTEM	Q*		*		*	*		*		
	44	ND TUNNEL (OS300)	*		*UALIF	ICATION TES	\$T*		*		*	*		*		
	*		*		*PROGE	RAMS	*		*		*	*		*		
						-										

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	WIND TUNNEL TEST / DMS DATA	PROCESSING	341
* * * TEST * * * CONFIGURATIONS ID * REPORT TITLE * TESTED	* * TEST * TYPE OF * PURPOSE * TEST	*MODEL * * COGNIZANT * SCALE* TESTING * TEST DMS *MACH RANGE* AGENCY * PERSONNEL	* BASIC *PUBLICATIONS *DR COMMENTS
AEDC - *RESULTS OF A WIND* PWT16T - *TUNNEL TEST ON T * TF-608 /*HE SPACE SHUTTLE * OS56 *UMBILICAL PURGE C* CR-167,3G6*URTAIN IN THE AED* *C 16-T PROPULSION* *WIND TUNNEL (PWT * *), USING MODEL 10* *8-D (OS56) * AEDC - *TEST RESULTS FROM*60-0 HWTB - *THE NASA/ROCKWEL *56-0 V41B-G9 /*L INTERNATIONAL S*83-D OH109 *PACE SHUTTLE O O1* CR-167,349*75-SCALE ORBITER * *MODELS 56-D/60-0 * *AND O 04-SCALE OR* *BITER FOREBODY MO* +DEL 83-O CONDUCTE* *D IN THE AEDC/VKF* *-B 50-INCH HYPERS* *ONIC WIND TUNNEL *	*TO DETERMINE THE *PRESSURE *BREAK-AWAY CHARAC* *TERISTICS OF THE * *SS ORBITER UMBILI* *CAL PURGE CURTAIN* *DURING LAUNCH. * * * * * ** ** ** ** ** ** ** ** ** *	*1 0	* * * * * * * * * * * * * * * * * * *
*(TESTS OH109 & OH+	* * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	. *VOLUME O2

						WIND	TUNNEL TEST	/ 1	DMS DATA	PROCES	SSING					34
		*		*	~~~~	*		*		*MODEL	- -	· *	 *	COGNIZANT	* BAS	IC
TEST	-	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF		_	* TESTING	*	TEST DMS	*PUBLIC	
ID		*	REPORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR COM	MENT:
EDC		*T	EST RESULTS FRO)M+6	0-0	*T0	OBTAIN ADDITE)*PI	RESSURE	*0 017	75 .	*ROCKWELL/	*11	M A. COLLINS,	J*DMS-DR	-2490
WTB			HE NASA/ROCKWEL		•		AERODYNAMIC I			*0 04	•	→AEDC -		GEE. ROCKWELL		
418-G9	} /	/*L	INTERNATIONAL	5+8	3-0	*EAT	ING DATA IN F	I *		*8 0				NNETH W. NUTT.		198
H109		*P	ACE SHUTTLE O.C	* 1 (*NER	DETAIL THAN	9 +		+8 0		+D TUNNEL (B)			*	
R-167,	35	1+7	5-SCALE ORBITER	* \$			IOUSLY TESTED			*		*		R HOULIHAN	*	
		*M	ODELS 56-0/60-0	* (*FOR	ORBITER STS-	1*		*		*	*B.	J BURST	*	
		* A	ND 0.04-SCALE C)R*		*ENT	RY YAW ANGLES	*		*		*	*-D	MS	*	
		B	ITER FOREBODY N	10		*		*		*		*	*		*	
		D	EL 83-0 CONDUCT	E		*		*		*		*	*		*	
		D	IN THE AEDC/VK	(F		*		*		*		*	*		*	
		~	B 50-INCH HYPER	?S		*		*		*		*	*		*	
		*0	NIC WIND TUNNEL	*		*		*		*		*	*		*	
		(TESTS OH109 & C)H		*		*		*		*	*		*	
		*1	09B)	*		*		*		*		*	*		*	
		*		*		*		*		*		*	*		*	
EDC	-	*R	ESULTS OF THE S	S+0	V-102 (RIGHT HAI	V*ELE	VON GAP HEATIN	N*HI	EAT-TRANS	\$*0.025	5 /	*ROCKWELL/	*J.	COLLINS/RI	*DMS-DR	-2492
WTB	-	*V	ELEVON GAP HEA	T*D	WING AND TRUNCA	4+G R	ATES	*		*8 O	-	*AEDC -	*S	R HOULIHAN	∗JUNE,	198
43B-17					ED AFT FUSELAGE			*		+8 0		*HYPERSONIC WI	N*H	C. ZIMMERLE	*	
H107		*H	E 0.025-SCALE S	₽÷	,	*		*		*		*D TUNNEL (B)	*-D	MS	*	
R-167,	359	3 ∗6	CE SHUTTLE ORBI	T*		*		*		*		*	*		*	
			R MODEL (94-0)			*		*		*		*	*		*	
		*N	THE AEDC/VKF H	IY+		*		*		*		+	*		*	
		P	ERSONIC WIND TU	IN		*		*		*		*	*		*	
		*N	EL B (0H107)	*		*		*		*		*	*		*	
		*		*		*		*		*		*	*		*	
RC	-	* A	ERODYNAMIC HEAT	I *0	V-102 ELEVON GAI	*ELE	VON/ELEVON GAI	P*P!	RESSURE	*0 10	/	*ROCKWELL/	*C.	L. BERTHOLD/R	I*DMS-DR	-249
5HWT	-	*N	G TESTS OF A O.	1*		*AND	STUB HEATING	*		*7.3	 ′	*ARC -	*S.	R. HOULIHAN	*JUNE.	19
54	,	/*0	-SCALE SS ORBIT	E*			TRIBUTION	*		*73		*3 5-FOOT HYPE	R*H	C. ZIMMERLE	*	
H108		*R	ELEVON/ELEVON	G∗		*		*		*		*SONIC WIND TU	N*-D	MS	*	
R-167,	360		P MODEL 93-0 IN			*		*		*		*NEL	*		*	
			HE NASA/ARC 3 5			*		*		*		*	*		*	00
		F	OOT HYPERSONIC	₩		*		*		*		*	*		*	유
		* I	ND TUNNEL (OH10	8*		*		*		*		*	*		*	Ğ
		+)	, -	*		*		*		*		*	*		*	ΑĒ
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		MILIAD I DIMIACE	1621 / DM2 (ATA PROCESSING					34
			*	*MODEL	*	* C	OGNIZANT	* F	ASIC
TEST *	* CONFIGURAT	TONS * TEST	* TYPI		LE* TESTING		ST DMS		ICATION
ID * REPORT T						* P	ERSONNEL	*OR C	OMMENTS
10 F REFORT I.									
- *TEST RESUL	.c cDOM*26-0	*UBIVIVE NEW	TER HE*PRESSU	IRF + 0 0175	, *ROCKWELL/	*C. L	BERTHOLD,	J.*DMS-	DR-2495
HWT - *THE NASA/RO		*ATING DATA		* 0 04			OCKWELL	*OCT	
/*L INTERNAT		*ABLISH MACH		+53 -	*3.5-FOOT HYP			*	•
10 *PACE SHUTT!		*R SENSITIVI		*7 3	*SONIC WIND T			*	
160.844+75-SCALE DI		+ORBITER IN		*	+NEL	*-DMS		*	
*MODELS 56-0		*ORBITER IN	*	*	*	*		*	
*AND THE O	• = =	*	*	*	*	*		*	
*E ORBITER	=	*	*	*	*	*		*	
*Y MODEL 83		*	*	*	*	*		*	
*UCTED IN TH		*	*	*	\(\psi\	*		*	
*/ARC 3 5-F0		· •	*	*	*	*		*	
PERSONIC WIN		*	*	*	*	*		*	
*EL (TEST OF		*	*	*	*	*		*	
*	*	*	*	*	*	*		*	
C - *RESULTS OF	THE TR+0.0175-SCALE	56-0+TO ORTAIN H	FAT TR*HFAT-	FRANS* 8 0-	*ROCKWELL/	*C. L	BERTHOLD/	RI*DMS-	DR-2496
B - *ANSATLANTI	ABORT*O.0175-SCALE	CO-O*ANSEED DATA	UN UB*	* 8 0	*AEDC -	*S R	HOULIHAN	*VDLU	ME Of
D - TANSAILANII	ST(OH *O O4-SCALE F	OPERO*RITED AT AT	TTTUDF*	*	*HYPERSONIC W	IN*B J.	BURST	+NOV.	, 198
	THE O *DY 83-0	*S THAT WOUL	D BE E*	*	+D TUNNEL (B)			*	
-167,380+0175-SCALE		*NCOUNTERED		*	*	*		*	
*ND 60-0, Al		*RANSATLANTI		*	*	*		*	
+0.04-SCALE		*T MANEUVER	*	*	*	*		*	
*HIN SKIN TI		*	+	*	*	*		*	
*UPLE MODEL:		*	*	*	*	*		*	
*E AEDC VKF		*	*	+	*	*		*	
*B HYPERSON		**	*	*	*	*		*	
*D TUNNEL(O	· ·	*	*	*	*	*		*	
***************************************	1111) ~	*	*	*	*	*		*	
	THE TR+O 0175-SCALE	SE-O*TO ORTAIN H	FAT TR+HEAT-	FRANS* 8.0-	*ROCKWELL/	*C. L	BERTHOLD/	'RI*DMS-	DR-2496
	ABORT+O 0175-SCALE			* 80	*AEDC -	*S R	HOULIHAN	*VOLU	ME 02
	ST(OH +O O4-SCALE F			*	*HYPERSONIC W	IN*B J.	BURST	*N0V	, 198
	THE O *DY 83-0	*S THAT WOUL		*	*D TUNNEL (B)	*-DMS		*	
-167.381*0175-SCALE		*NCDUNTERED		*	*	*		*	
*ND 60-0. A		*RANSATLANTI		*	*	*		*	
*0 04-SCALE		*T MANEUVER	*	*	*	*		*	으 으
*HIN SKIN T		*	*	*	*	*		*	
*UPLE MODEL		*	*	*	*	*		*	'ਹ 😥
*E AEDC VKF		*	*	*	+	*		*	ORIGINAL OF POOR
*B HYPERSON		*	*	+	*	*		*	\mathbf{Q}
*D TUNNEL(O		*	*	*	+	*		*	AU F
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					WIND '	TUNNEL TE	ST /	DMS DATA	PROCE	SSING					344
	*		*		*		*		*MODE	L	*	*	COGNIZANT	* E	BASIC
TEST			*	CONFIGURATIONS	*	TEST	*	TYPE OF	*	SCALE	* TESTING	*	TEST DMS	*PUBI	ICATIONS.
ID	* RE	PORT TITLE	*	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	PERSONNEL	*OR C	COMMENTS
				,											
DC	- *RESU	LTS OF THE	TR*0	.0175-SCALE 56-0	*TO 0	STAIN HEA	T TR*I	HEAT-TRAN	S* 8	0-	*ROCKWELL/	*C.	L. BERTHOLD/	EI+DMS-	DR-2496
BT	- *ANSA	TLANTIC ABO	RT+0	0175-SCALE 60-0	*ANSFI	ER DATA C	N DR*		* 8		*AEDC -		R. HOULIHAN		JME O3
1B-10	/*MANE	UVER TEST(O	H +0	04-SCALE FOREBO	*BITE	R AT ATT	TUDE*		*		*HYPERSONIC W	IN*B	J. BURST	*NOV.	1982
1111	*111	USING THE	0. +D			AT WOULD			*		*D TUNNEL (B)	* - DI	MS	*	
-167,	382*0175	S-SCALE 56-0	Α*		*NCOU	NTERED IN	1 A T*		*		*	*	- · · -	*	
	*ND 6	0-0, AND TH	E *			ATLANTIC			*		*	*		*	
	0 04	I-SCALE 83-0	T		*T MAN	VEUVER	*		*		*	*		*	
	HIN	SKIN THERMO	CO		*		*		*		*	*		* *	
	UPL	MODELS IN	TH		*		*		*		*	*		*	
	≯E AE	DC VKF TUNN	EL*		*		*		*		*	*		*	
	*B HY	PERSONIC WI	N *		*		*		*		*	*		*	
	*D TU	NNEL(OHI111)	*		* .		*		*		*	*		*	
	*		*		*		*		*		*	*		*	
С	- *RESL	LTS OF TEST	\$ *B	69C14DT1E54F14F0	*MEASL	JRE TURBL	ILENC*	PRESSURE	*0 36	/	*ROCKWELL/	*T.	J DZIUBALA,R	R*DMS	DR-2499
SWT	- *USIN	IG A 0.36-SC	AL*1	FD2FR12HA1HG1M18	*E IN	WAKE OF	ORB *		*0.07	-	*ARC ~	*.	BURROWS, J MAR	RO * AUGU	JST, 1981
3	/*E MC	DEL (76-D)	OF*N	92N94N107PR1R18V	*FUSE1	AGE USIN	IG HF*		*0 26		*40-F00T BY 8	0-*QU	IN/RI	*	•
164	*THE	SSV ORBITER	*2	3VT1VT2W129		TERMINE R			*		*FOOT SUBSONI	C *S	R HOULIHAN	*	
-160,	836*101	IN THE NASA	/A*		*DEPEN	NDENCE ON	ORB*		*		*WIND TUNNEL	*G	R. LUTZ	*	
	MES	RESEARCH CE	NT		*WAKE	CHARACTE	RIS *		*		*	*-D	MS	*	
	ER 4	OX80-FOOT SI	UB		*TICS.	AND ABIL	* YIT		*		*	*		*	
	SONI	C WIND TUNN	EL		*OF T/	ILCONE/S	C00P*		*		*	*		*	
	*(OA1	64)	*		*S TO	REDUCE T	URBU*		*		*	*		*	
	*		*		*LENCE	E:AND TO	OBTA*		*		*	*		*	
	*		*			IGHT TES			+		*	*		*	
	+		*		*OBE D	DATA W/WC	A T*		*		*	*		*	
	* 1		*		*AILCO	ONE	*		*		*	*		*	
	*		*		*		*		*		*	*		*	
:C	- *PHAS	E II SCREEN	IN+1	15-0 AFRSI MATER	*TO C0	NTINUE T	HE S*I	PRESSURE	*O 85	_	*ROCKWELL/	*J	G R COLLET	E*DMS-	DR-2500
TWT		ST OF AFRSI				ING PROC			*1 1		+ARC -	*/R		*DEC	
7-1		IAL USING M				ATED ON			*		*2-FOOT BY 2-			*	,
301	*EL 1	15-0 IN THE	A*			INVESTIC			*		*DT TRANSONIC			*	
-160,		RESEARCH CE				RELATIV			*		*IND TUNNEL	*-D		*	
		X2-FOOT TRA				ITY OF V			*		*	*	-· -	*	
		WIND TUNNE				ONF I GURAT			*		*	*		*	
	*(OS3		*		*OF AF		*		*		*	*		*	
		•			<u>.</u>		*				1.			al.	

			WIND	LUNNET LEZ.	r / t	OMS DATA	PROCES	SSING					34
*	*		*		*		*MODEI	 L ,	·	*	COGNIZANT	* B	ASIC
TEST *	* CON	FIGURATIONS	*	TEST	*	TYPE OF	*	SCALE .	TESTING	*	TEST DMS	*PUBL	ICATION
ID * REPORT TITLE	+	TESTED	*	PURPOSE	*	TEST	*MACH	RANGE?	AGENCY	+	PERSONNEL	*0R C	OMMENTS
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,													
RC - +SPACE SHUTTLE A				JBJECT ADV		RESSURE		-	ROCKWELL/		R. COLLETTE	•	
ITWT - *SI OMS PODS/JOI				EXIBLE RE			* 0 8		ARC -	*1	• DIVIN/DY	*OCT	, 198
)1-1 /+S DEVELOPMENT T				SURFACE IN			*		11-FOOT TR			**	
304A *T USING MODEL 1				N(AFRSI) SI			*				R HOULIHAN	*	
R-167,373*-0 SPECIMENS &				S TO AN EN			*		L (UNITARY		R LUTZ	*	
*DEL 96-0 TEST F				NT SIMULAT			+	,	k	*-DN	15	*	
*TURE IN THE AME				FLOW CHARAC			*	,	•	*		*	
*RESEARCH CENTER				TICS ENCOU			*	,		*		*	
*1X11-FOOT TRANS				AT THE OMS			*	,		**		*	
IC WIND TUNNEL	(D			THE SSV I			*	,		*		*	
*S304A)	*			ASCENT, &			*	,		*		*	
*	*			JATE THE A			*	,		*			
*	*			INTS IN TH	15 *		*	,	*	*		# 	
*	*			RONMENT	*		*	,		*		本 	
*	*		*		*		*		,	*		* '/DubMc	DD AEOA
C - *SPACE SHUTTLE A				IBJECT ADV		RESSURE	* 11		ROCKWELL/		R COLLETTE		
/SWT - +SI OMS PODS/JOI				EXIBLE RE			*		ARC -	*I	D	*4060	IST, 198
)1-1 /*S DEVELOPMENT T				SURFACE IN			*				R HOULIHAN	*	
304B *T USING MODEL 1				N (AFRSI)			*		OT SUPERSOI		* *		
R-167,378∗-D SPECIMENS AN				VS TO AN E			*		WIND TUNNE	L (U*-DW	15	*	
*MODEL 81-0 TEST				NT SIMULA			*		NITARY)	*		*	
*IXTURE IN THE A				E FLOW CHAI			*	,	k	*		*	
*S RESEARCH CENT				STICS ENCO			*	,	.	*		**	
*9X7-FOOT SUPERS				AT THE OM			*	,	K	*		**	0 0
IC WIND TUNNEL	(0		_	OF THE SSV			*	,	k	*		*	~ મેં કે
*S3O4B)	*			ASCENT &			*	,	K	*		*	ĉ
*	*			JATE THE A			*	,	K	*		*	∼ે≅
*	*			INTS IN TH			*	,	K	*		本	റ്₹
*	*		*ENV1	RONMENT	*		*	,	k	*		*	ORIGINAL OF POOR
*	*		*		*		*	,	k	*		*	
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							WIND	TUNNEL TEST	/ (DMS DATA	PROCE	SSING							34
		*			+		*		*		*MODE	L	*	*		COGNIZANT	* B	ASIC	
TEST	•	*			*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING		TE	EST DMS		-	ON
ID 		*	REPORT	TITLE	* 	TESTED	* 	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	*	P	PERSONNEL	*OR C	OMMEN	TS
ARC	_	· *R	ESULTS (OF COMBI	TN+2:	ΩΔ.	*TO 1/	ERIFY THAT 1	CD+D1	nectine		<i>C</i>	**************************************			UATEGAL (LABO	. 544		
ΓPT			D LOADS			•		LES REMAIN A		KESSUKE	* 1					WATSON/LARC			
05,6,7						OD (NOT TESTED)	*TACH	ED TO ELIGHT	4.1." *		* ,		*8-FOOT TRANS			BURROWS/RI	*JULY	, 1	98
553A	, -	* E	NASA/LA	ARC 8-FO	00*	00 (101 123120)		CTURE UNDER			*		*IC PRESSURE				*		
553B			TPT US					T CONDITIONS			*		*NNEL		. K	4012	*		
R-167.	36	3*0	ONF I GUR	ATION 20) *			ARE MEASURED	. ,		*		*		CINIC		<u>.</u>		
			PS FLOW					EDICTED TILE			*		→	T 1			τ		
		*N	ELS (OS	53A/B)	*			P LOADS & TI			*		*				÷		
		*			+			ESPONSES. &	-		*		*	*			* *		
		*			*			MINE TILE RO			*		*	•					
		*			*			SS AFTER SIN			*		*				*		
		*			*			REPEATED MI			*		+				*		
		*			*		*SION	S	*		*		*	*			*		
		*			*		*		*		+		*	*			*		
SC.			PACE SHL				*TO S	UBJECT LARGE	-*PF	RESSURE	* 1	8	*ROCKWELL/	*.)	GR	R. COLLETTE/	R*DMS-	DR-25	04
7SWT			I LARGE-				*SCAL	E SPECIMENS	0*		*		+ARC -	* I			*SEPT		
1 - 80			ELOPMENT				*F AD	VANCED FLEXI	(B*		*		*9-FOOT BY 7-	·F0*S	R	HOULIHAN	*	,	
302B			NG MODEL				*LE R	EUSABLE SURF	* A		*		*OT SUPERSONI	C *G	R.	. LUTZ	*		
R-167,	37		ECIMENS				*CE I	NSULATION (A	\F*		*		*WIND TUNNEL	(U*-	DMS		*		
			81-0 TE				*RSI)	TO SS ORBIT	E*		*		*NITARY)	*			*		
			E IN THE				*R AS	CENT AERODYN	1A*		*		+	*			*		
			EARCH CE				*MIC	PRESSURE GRA	\D*		*		*	*			*		
			-FOOT SU					LOADINGS &			*		*	*			*		
			IND TUNN	NEL (OS3	3 *			LENCE LEVELS			*		*	*			*		
		*0	28)		*		*FOR	TIME DURATIO	1N*		*		*	*			*) (
		*			*			UIVALENT TO			*		*	*			*	7	١,
		*	•		*			ISSIONS WITH			*		*	*			*	₩ ₹	a (
		*			*			ATTER OF FOU	IR*		*		*	*			*	ے	ሩ ፣
		*			*		*(400	MISSIONS)	*		*		*	*			*	OF POUR	5 5
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			WIND TUNNEL TEST	/ DMS DATA	PROCES	SING	~~~					347
					*MODEL	*		*	COGNIZANT	*	BASIC	
TEST	¥ ,	CONFIGURATIONS	* TEST	* TYPE OF			TESTING		EST DMS		LICATI	ONS
ID	* REPORT TITLE	* TESTED	* PURPOSE	* TEST			AGENCY		PERSONNEL	*OR	COMMEN	TS
							poorum t /		MEYER/ARVIN	/+DHC	-DD-0E	OE.
	*RESULTS OF ASCENT		*TO DETERMINE THE		* 1 15			*R.G			-UK-25 UST, 1	
	*AERODYNAMIC LOAD		*TRANSONIC FLOW E		*		TRANSONIC PROP				. , ,	302
	/*ING TESTS OF THE '		*FECTS ON THE TPS		*		ULSION WIND TU		•	*		
	*SS THERMAL PROTECT		*TILES, DOOR & CA		*		NNEL (PWT-16T)	_		*		
CR-167,376	6*TION SYSTEM (TPS)		*ITY THERMAL BARR		*	- T		*-DMS		*		
	*IN & AROUND THE >		*ERS, FOAM ON THE		т ъ			7 DING	,	*		
	ORBITER/ET UMBILI		*UMBILICAL, PRESSU		*	- T		" •		*		
	*CAL DOOR & CAVITY		*RE SEAL, CLOSEOU		*	•		•		*		
	+. USING MODELS 10		*CURTAIN, & DOOR		+	- T		<u>.</u>		*		
	*8-0 & 1090 IN THE		*FLOW RESTRICTOR	*	▼	•		т ъ		4		
	*AEDC 16-T PROPUL >		*	* -	*	· ·		.				
	*SION WIND TUNNEL >	?	*	*	¥			-T		T 3		
	*(DS46A-G)	*	*	*	*	*		*				
	* ,	,	*	* .	*	*	ROCKWELL/	*1 D	LEBLANC/ROCK	~ - + DMC	-00-25	06
	*GAP FILLER REUSE >		*	*PRESSURE	*			*UELL		*DEC		982
	*TESTS OF FULL-SCA		*	*	*					*DEC	, '	502
- , , ,	/*LE SPACE SHUTTLE *		*	*	*		11-FOOT TRANSO			T.		
	+ORBITER TILE ARRAY		*	*	*		NIC WIND TUNNE			•		
	3*Y MODELS IN THE N		*	*	*		L (UNITARY)		•	T		
CR-167,38	4*ASA/ARC 9X7-FOOT		*	*	*		9-FOOT BY 7-FC			-T-		
	*AND 11-FOOT UNITA		*	*	*		OT SUPERSONIC			* *		
	*RY PLAN WIND TUNN		*	*	*		WIND TUNNEL (U	}*		** .4.		
	*El (0\$60,0\$61A,0\$°)	*	*	*	*	NITARY)	*		# 		
	*61B,0\$62,0\$62A, A	k	*	*	*	*		*		*		
	+ND OS63)	}	*	*	*	*		*		#F		
	+	k	*	*	*	*		*		*		~~
ARC -	*SPACE SHUTTLE AFR	FIXTURE 96-0	*TO EVALUATE DESIG					_	MARSHALL/RI			
11TWT -	*SI DESIGN CRITERI	FIXTURE 81~O	+N/ENGINEERING CO		*1.8				KINGSLAND/RI		., 1	983
548-1	/+A DEVELOPMENT TES	k	*CEPTS FOR APPLICA		*		11-FOOT TRANSC			*		
97SWT -	*TS IN THE NASA/AM	۲	*TION AND REPAIR (*		NIC WIND TUNNE			*		^ ~
DS306A/B	*ES RESEARCH CENTE	>	*F THE ADVANCED F	L*	*		L (UNITARY)		i	*		れた
CR-167,65	O*R 11X11-FOOT AND '	k	*EXIBLE REUSABLE	S*	*		9-FOOT BY 7-FC			ж.		
	*9X7-FOOT WIND TUN:	k	*URFACE INSULATION	N*	*		OT SUPERSONIC			*		שַ בַּ
	*NELS USING MODEL	*	*(AFRSI) BLANKET		*		WIND TUNNEL (U	J*		*	9	ORIGINAL OF POOR
	*23-0 (OS306A/B) >	k	*MATERIAL ON SPACE		*		NITARY)	*		*	2	₹ <u>></u>
	*	k	*SHUTTLE ORBITER		*	*		*		*		
	*	h:	*(DV103) AND TO SI	J*	*	*	:	*	,	*	6	ידי כ
	*	k	*PPORT THE AFRSI	C*	*	*		*		*	Č	PAGE
	*	k	*ERTIFICATION PRO	G*	*	*	•	*		*	<u> </u>	> G)
	*	k	*RAM	*	*	*		*		*		37
	*	k	*	*	*	*		*		*	_	-
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					WIND	TUNNEL TES	T /	DMS DATA	PROCESSING	3 					348
	*		*		*		*		*MODEL	*	*	COGNIZANT	*	BASIC	:
TES	T *		+	CONFIGURATIONS	*	TEST	*	TYPE OF	* SCAL	E* TESTING	*	TEST DMS	*PUE	BLICAT	IONS
ID	*	REPORT TITLE	E *	TESTED	*	PURPOSE	*	TEST	+MACH RANG	BE* AGENCY	*	PERSONNEL	*0R	COMME	:NTS
ARC	x	SDACE SHITTIE	EDC+E	LAT PANEL W/FRCI	י אדם חו	RTAIN VENT	TNG+D	DESCRIBE	* 78-	*ROCKWELL/	*R /	A. MARSHALL/RI	*DM9	S-DR-2	2509
549-1		I-12 TPS TILE				ACTERISTIC		KESSOKE	* 1 80	*ARC -		B. KINGSLAND/R			1982
975WT		TING TEST IN				INTERNAL P	_		*			R. HOULIHAN	*	,	
		NASA/AMES RESI				S OF FIBRO			*	*OT SUPERSON			*		
		H CENTER 11X1				FORCED COM			*	*WIND TUNNEL			*		
		OT AND 9X7-FO				INSULATION			*	*NITARY)	*	.,_	*		
	*	IND TUNNELS (0A37*			12) TPS TI			*	*	*		*		
	+	A/B)	*			SED TO PRE			*	*	*		*		
	*	•	*		*URE	GRADIENTS	ASS*		*	*	*		*		
	*		*		+OCIA	TED WITH A	ERO*		*	*	*		*		
	*		*		*DYNA	MIC SHOCKS	*UU		*	*	*		*		
	*		*		*RING	SS ASCENT	*		*	*	*		*		
•	*		*		*		*		*	*	*		*		
ARC	- +	SPACE SHUTTLE	AFR+		*T0 D	EMONSTRATE	BA*F	PRESSURE	* 0 80-	*ROCKWELL/	*B.	A MARSHALL/RI	*DM	5-DR-2	2510
11TWT	- *	SI FULL-SCALE	CRE*		*SIC	AFRSI FLEX	(IBL*		* Q.88	*ARC -	*R !	B. KINGSLAND/R	I *DE	Ξ,	1982
548~1	/+	DIBILITY TEST	IN *		*E BL	ANKET CAPA	BIL*		*			R HOULIHAN	*		
0S309A	*	THE NASA/AMES	RES*		*ITY	IN AN EXPA	\NSI*		*	*NIC WIND TU		R. LUTZ	*		
CR-167		EARCH CENTER				ECOMPRESSI			*	*L (UNITARY)) *-D	MS	*		
		1-FOOT WIND TO	–		*SH0C	K ENVIRONM	(ENT*		*	*	*		*		으유
		L USING MODEL			*		*		*	*	* '		*		ORIGINAL OF POOR
		-O INSTALLED :			*		*		*	*	*		*		~თ £
		HE 96-0 TEST I	FIXT*		*		*		*	*	*		*		OZ
	*	URE (OS309A)	*		*		*		*	*	*		*		8
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				WIND TUNNEL TES		PROCESS DMS DATA	PROCESSING				34
					 u		 *MODEL			COGNIZANT	* BASIC
TEST		* *	CONFIGURATIONS	* TEST	~ ₩	TYPE OF			*	TEST DMS	*PUBLICATION
ID		* REPORT TITLE +		* PURPOSE		TEST	+MACH RANGE		*	PERSONNEL	*OR COMMENTS
		* KEPOK! !!!C	162163			1631					
ARC		* *		*	*	FORCE	*58 -	+LARC /	∗ ∪	E VAUGHN	*DMS-DR-2213
F4	_ :	* *		*	*		*6 O	*LARC -		J. BURST	*
20-237				*	*		*	*FREON TUN	NEL *-D	MS	*
OHT6				*	*		*	*20-INCH H			*
56	1	+ *		*	*		*	*ONIC TUNN	EL (M*		*
A53	٠,	* +		*	*		*	*ACH 6)	*		*
A54		* *		*	*		*	*	*		*
	,	* +		*	*		*	•	*		*
ARC	- :	*RESULTS OF SUBSON*	VEHICLE 5 ORBITER	*TO OBTAIN PRES	SUR*	PRESSURE	* 0.030 /	*ROCKWELL/	* ქ	J DAILEDA/RI	*DMS-DR-2237
/STOL		*IC STUDIES USING *		*E DISTRIBUTION	S *	FORCE	*0 2 -	*LARC -	*ປ.	MARROQUIN/RI	*
14		*AN O 030 SCALE OR*		*AND FORCES AND			*0 2	*V/STOL TR	ANSIT+S	R HOULIHAN	*
4 155		*BITER CONFIGUR- *		*MENTS FOR THE			*	*ION RESEAT	RCH W+H	C ZIMMERLE	*
		ATION 140A/B MODE		*ORBITER IN THE			*	*IND TUNNE	L *-D	MS	*
		L (47-0) IN THE N		*PROACH AND LAN			*	*	*		*
		+ASA/LARC V/STOL T*		*G CONFIGURATION	_		*	*	*		*
		*RANSITION *		*WITH AND WITHOU			*	*	*		*
		RESEARCH WIND TUN		*THE INFLUENCE			*	*	*		*
		*NEL (OA155) *		*A GROUND PLANE			*	*	*		*
		* *		*ERTICAL TAIL L			*	*	*		*
		* *		*S AND ELEVON.	*		*	*	*		*
		* *		*BODY FLAP, AND	RU*		*	*	*		*
		* *		*DDER HINGE MOM			*	*	*		*
	,	* *		*S WERE ALSO OB			*	*	*		*
		* *		*NED	*		*	*	*		*
	,			*	*		*	*	*		*
ARC	_ :	** ** **		*STING EFFECTS.	BA*	FORCE	*19.1 -	+LARC /	*BI	LL WOODS/LARC	*DMS-DR-2256
2HT		* *		*LANCE SENSITIV			*20 36	+LARC -		E VAUGHN	*
39	1	sk **	•	*ES	*		*	+22-INCH H	ELIUM*-D	MS	*
468		* *		*	4:		*	*TUNNEL	*		*
		* *		*	*		*	*	*		*
ARC	_	* *		*DETERMINE EFFE	CTS*	FORCE	*0.3 -	*LARC /	*ა	E. VAUGHN	*DMS-DR-2260
TPT	_	•		*OF SEVERAL WIN	-		*1 2	*LARC -	*-D	MS	*
15	7			*FILLET CONFIGU	-		* -	*8-FOOT TR	ANSON*		*
TPT				*IONS	*		*	*IC PRESSU			* * * *
76	1			*	*		*	*NNEL	*		*
760B	-	* *		*	*		*	+8-FOOT TR	ANSON*		*
160C		* *		*	*		*	+IC PRESSU			*
1000		* *		*	*		*	*NNEL	*		* *
		· * *		*	*		*	+	*		Α*
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OF POOR	ORIGINAL
QUALITY	PAGE

35				SING	ROCES	DMS DATA	WORK IN TEST /	TUNNEL	WIND						
* BASIC	COGNIZANT	* C		. *	MODEL		*		*		*			*	
*PUBLICATION	EST DMS	* TE	TESTING	SCALE*		TYPE OF	Γ *	TEST	, *		*			*	TEST
*OR COMMENTS	PERSONNEL	* P	AGENCY	RANGE*	MACH	TEST	SE *	PURPOS	*	TESTED	*	TITLE	REPORT	*	ID
*DMS-DR-2287	CDOMUED/DI	*P S	OCKWELL/	- *20	1 55	TRUCT-DYN	INTEGRI*	VERIFY 1	*TD		*			- *	RC
*	. HOULIHAN			*AR	2 5		DRBITER*	OF THE C	*TY		*			- *	7SWT
*	ZIMMERLE					;		I MATERI			*			/*	66-1
*			T SUPERSON					ANEL FLU			*			*	IS 13
*			IND TUNNEL				* *	IRONMENT	*ENV		*			*	
*		*	ITARY)			,	*		*		*			*	
*		*	,	*		1	*		*		*			*	
*DMS-DR-2291	. VAUGHN	*J €.	ARC /	/ *LA	.0040	ORCE :	*F		*		*			~ *	SWC
*	BURST			*NS			*		*		*			- +	A
*		*-DMS	UNNEL 8A			:	*		*		*			/*	275
*		+ 1		*		,	*		*		*			*	A79
*		*		*		:	*		*		*			*	
*DMS-DR-2339		*	OCKWELL/	*R0		TRUCT-DYN:	*5		*		*			→ *	RC
*		*	RC -	*AR		,	*		*		*			- *	2TWT
*		2-FO*	-FOOT BY 2	*2-		,	*		*		*			/*	67-1
*		IC W*	T TRANSONI	*OT		:	*		*		*			*	S32
*		*	ND TUNNEL	*IN		;	*		*		*			*	
*		*		*		1	*		*		*			*	
*DMS-DR-2362		*	ARC /	*LA		ORCE	*		*		*			- *	ARC
*		*	ARC -	*LA			*		*		*			* *	TPT
*		√SON*	-FOOT TRAN	*8-			*		*		*			/*	64
*		Ξ TU*	C PRESSURE	*IC			*		*		*			*	A92
*		*	NEL	*NN		1	*		*		*			*	
*		*		*	•		*		*		*			*	
*DMS-DR-2379	VAUGHN	*J E	ARC /	*LA		ORCE :	*5		*		*			- *	ARC
*	BURST	*B J	ARC -	*LA			*		*		*			- +	TPT
*		VSON+-DMS	-FOOT TRAN	*8-		,	*		*		*			/*	76
*		: TU*	C PRESSURE	*IC		•	*		*		*			*	A 106
*		*	NEL	*NN			*		*		*			*	
*		*		*		,	*		*		*			*	
*DMS-DR-2383	VAUGHN	*J. E	ARC /	*LA		RESSURE :	*F		*		*			- *	ARC
*	GLYNN	*J. L	ARC -	*LA		;	*		*		*			- *	FHT
*		-FLO*-DMS	ONTINUOUS-	*C0		,	*		*		*			/+	30
*		C T*	HYPERSONI	*W		,	*		*		*			*	A93
*		*	NNEL	*UN		,	*		*		*			*	
*		*		*		,	*		*		*			*	

OF POOR	ORIGINAL
	Page is

				WIND TUNNEL FEST	N PROCESS DMS DATA	PROCESSING			35
			·	*	*	*MODEL	* *	COGNIZANT	* BASIC
TEST	*		* CONFIGURATIONS	* TEST	* TYPE OF		E* TESTING *		*PUBLICATION
ID	*	REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RANG		PERSONNEL	*DR COMMENTS
EDC	- *		*MODEL 83-0 (04	S*1)DETERMINE ORBIT	*HEAT-TRANS	5* 0.04 ,	*ROCKWELL/ *F	L LAMOINE/RI	*DMS-DR-2388
IWTB	- *		*CALE) ; MODEL 60	-*ER (60-0)WINDWARD	+	* 0 0175 /	*AEDC - *c	J E VAUGHN	*
41B-R4A	/*		+0 (0175 SCALE)	*SURFACE HEATING	*	*7.90 -	*HYPERSONIC WIN*	·DMS	*
H84A	*		*	*OF TURBULENT	*	*8.0	*D TUNNEL (B) *		*
	*		*	*FLOW ORIGINATING	*	*	* *		*
	*		*	*IN THE AREA OF TH	*	*	* *		*
	*		*	*E NOSE RCC/RSI IN	 *	*	* *		*
	*		*	*TERFACE	*	*	* *		*
	*		*	*2)DETERMINE ORBIT	*	+	* *		*
	*		*	*ER (83-0) LEESIDE	*	*	* *		*
	*		*	*HEATING IN SAME	*	*	*		*
	*		*	*AREA	*	*	* *		*
	*		*	*	*	*	* *		*
RC	- *		*OT FLAT PLATE	*	*HEAT-TRANS	S* O O4 /	*ROCKWELL/ *7	L. MULKEY	*DMS-DR-2393
·	- *		*	*	*	*	*ARC - *0	i. W. KLUG	*
28-1	/*		*	*	*	*	*3 5-FOOT HYPER*	·DMS	*
H51A	' *		*	*	*	*	*SONIC WIND TUN*	•	*
	*		*	*	*	*	*NEL *		*
	*		*	*	*	*	* *		*
TV	- *		*	*	*FORCE	*	*LARC / *:	J E. VAUGHN	*DMS-DR-2394
	- *		*	*	*	*	*LTV - *E	B. J BURST	*
611	/*		+	*	*	*	*HIGH SPEED WIN*	·DMS	*
A 109			*	*	*	*	*D TUNNEL *		*
.A 103	*		*	*	*	*	* *		*
.ARC	- *		*	*	*FORCE	*	*LARC / **) E. VAUGHN	*DMS-DR-2411
	- *		•	*	*	*	*LARC - *E	BURST	*
304	/*		*	*	*	*	*8-FOOT TRANSON*	-DMS	*
A116	/ "		*	*	*	*	*IC PRESSURE TU*		*
ATIO	*		*	*	*	*	*NNEL *		*
			*	*	*	*	* *		*
ARC	_ •		*	*	*FORCE	*	*LARC /, *u	J. E VAUGHN	*DMS-DR-2425
TPT	_ T		•• •	*	*	*		J. BURST	*
13	- /*		*	*	*	٠ *	*8-FOOT TRANSON*	DMS	*
A117	/ "		•	*	*	*	*IC PRESSURE TU*	-	*
MILI	τ 1		** **	*	*	*	*NNEL *		*
	*		*	*	*	*	* *		*
EDC	_ *		*MODEL GO-O: ! IM	E*DETERMINE TURBULE	*HEAT-TRANS	S* 0 0175 /		J W CUMMINGS/RI	*DMS~DR~2427
EDC	- *		*NODEL 60-0; LIN	*NT HEATING ON LOW		*7 96 -	*AEDC - *:	J E VAUGHN	*
WTB	- ,		75 VL/U-000140C	*ER FUSELAGE AND W		*8 O	*HYPERSONIC WIN*	·	*
41B-V2C	/*		* 	*ER FUSELAGE AND W	±	**	*D TUNNEL (B) *	J,-10	*
H103B	**		# 	TING SOKEACE		•	* *		*
	*		*	ৰ	•••	•			

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ORIGINAL OF POOR

WORK IN PROCESS

WIND TUNNEL TEST / DMS DATA PROCESSING COGNIZANT BASIC TEST CONFIGURATIONS * * TYPE OF * SCALE* TESTING TEST DMS *PUBLICATIONS * REPORT TITLE TESTED PURPOSE * TEST *MACH RANGE* AGENCY PERSONNEL *OR COMMENTS AEDC *FORCE *ROCKWELL/ *S R HOULIHAN *DMS-DR-2439 PWT16T - * *AEDC -*G W. KLUG 517 /* *TRANSONIC PROP*-DMS IA182 *ULSION WIND TH* *NNEL (PWT-16T)* LARC *FORCE *LARC *J E VAUGHN *DMS-DR-2441 LTPT *! ARC -*B. J BURST 255 *LOW-TURBULENCE*-DMS LA127 *PRESSURE TUNN * *EL LTV *FORCE *LARC *J E VAUGHN *DMS-DR-2442 **HSWT ⊁LTV** *B. J BURST 646 *HIGH SPEED WIN*-DMS LA 128 *D TUNNEL LARC *FORCE *LARC *J E VAUGHN *DMS-DR-2446 UPWT *LARC *B J BURST 1270 *UNITARY PLAN W*-DMS LA122 *IND TUNNEL ARC *PRESSURE *ROCKWELL/ *S R. HOULIHAN *DMS-DR-2447 11TWT *ARC -*B J. BURST 436-2 *11-FOOT TRANSO*-DMS 0552 *NIC WIND TUNNE* *L (UNITARY) ARC *PRESSURE *ROCKWELL/ *DMS-DR-2458 *S. R HOULIHAN 11TWT *ARC *B. J BURST 369-1 /* *11~FOOT TRANSO*-DMS 0536 *NIC WIND TUNNE* *L (UNITARY) ARC *PRESSURE *ROCKWELL/ *S. R HOULIHAN *DMS-DR-2459 97SWT *B J BURST 369-1 *9-FOOT BY 7-FO*-DMS 0537 *OT SUPERSONIC * +WIND TUNNEL (U* *NITARY)

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WORK IN PROCESS WIND TUNNEL TEST / DMS DATA PROCESSING

SCALE* TESTING TEST CONFIGURATIONS * TEST TYPE OF * TEST DMS *PUBLICATIONS TESTED TEST *MACH RANGE* AGENCY PERSONNEL *OR COMMENTS ID PURPOSE MSFC *DETERMINE CAUSE A*FORCE * 0 004 / *MSFC *BILL BRADDOCK/LMS*DMS-DR-2460 14TWT *ND AERO FIX TO EL* *0.6 -*MSFC *C-HUNTSVILLE *1 25 *14-INCH TRISON+J L. GLYNN 655 /+ *IMINATE ORBITER R* FA27 *OLLING MOMENT *IC WIND TUNNEL*J E VAUGHN *-DMS ARC *ROCKWELL/ *S. R HOULIHAN *HEAT-TRANS* *DMS-DR-2461 ∗G. W KLUG 3.5HWT *ARC 244 *3 5-FOOT HYPER*-DMS IH51D *SONIC WIND TUN* *NEL ARC *TO OBTAIN PERFORM*PRESSURE *ROCKWELL/ *R B. KINGSLAND/RO*DMS-DR-2463 11TWT *ANCE CHARACTERIST* *ARC *CKWELL *11-FOOT TRANSO*S. R. HOULIHAN 380~1 *ICS OF DAMAGED LR* *NIC WIND TUNNE*H C. ZIMMERLE 381-1 *SI TILE AND MINI-* 0541 *TILE WHEN SUBJECT* *L (UNITARY) *-DMS 0542 *ED TO TRANSONIC S+ 0545 *HOCK AND TURBULEN+ *T FLOW ENVIRONMEN* *ROCKWELL/ *R B KINGSLAND, R*DMS-DR-2465 ARC *81-0 HRSI TILE PA*TO DEFINE AND UND*PRESSURE **97SWT** *NEL *ERSTAND THE SURFA+ *ARC *OCKWELL *CE AND INTERNAL P* *9-FOOT BY 7-FO*S R. HOULIHAN 464 *OT SUPERSONIC *B J. BURST 0555 *RESSURE RELATIONS* *WIND TUNNEL (U*-DMS *HIPS FOR UNDENSIF* *NITARY) *IED TILES / *ROCKWELL/ *M.E NICHOLS/RI *DMS-DR-2466 LARC - *RESULTS OF INVEST*B75,C16,E64,F16,M*TO OBTAIN 6-COMPO*FORCE *0 010 *LARC *R.L. CALLOWAY/LAR*VOLUME 01 20HT6 - *IGATIONS OF THE O*52,N108,N110,N111*NENT VEHICLE FORC* 6 0-*20-INCH HYPERS+C 6559 *E AND MOMENT DATA* 8 0 /*.010-SCALE OV-102+,R20,V27,W131 유윤 *ONIC TUNNEL (M*J E VAUGHN 0A257 *CONFIGURATION SP * *. BASE AND STING-* CR-167,663*ACE SHUTTLE VEHIC* *CAVITY PRESSURE D* *ACH 6) *G W KLUG POOR *ATA. AND SPECIAL * *-DMS *LE ORBITER MODEL * *72-0 IN THE NASA/* *THERMOCOUPLE DATA* *LANGLEY RESEARCH * *FROM THE MODEL *CENTER 20-INCH MA+ PAGE QUALI *CH 6 TUNNEL (OA25* *7)

						MIND	TUNNEL	TEST	/ 1	DMS DATA	PROCES	SSING					35
	*		*			*			*		*MODEI	 L ,	-	*	COGNIZANT	* 1	BASIC
TEST	*		*	CON	IGURATIONS	*	TES	r	*	TYPE OF			* TESTING	*	TEST DMS		LICATION
ID	*	REPORT TITL	E *		TESTED	*	PURPO			TEST			* AGENCY	*	PERSONNEL		COMMENTS
RC	- *RE	SULTS OF IN	VEST+B	75.C	16.E64.F16.N	4*TO (OBTAIN (-0*F	ORCE	*0.010	o / ›	*ROCKWELL/	*M.E	NICHOLS/RI	*DMS	 -DR-2466
HT6	- *IG	GATIONS OF T	HE 0+5	2,N10	08,N110,N11						* 6 (- •	+LARC -		. CALLOWAY/LA		
59		010-SCALE OV		R20.	/27,W131		ND MOME				* 8 (_	*20-INCH HYPER			*	
257		ONFIGURATION					ASE AND				*		*ONIC TUNNEL (*	
-167,6		CE SHUTTLE V					ITY PRE				*	•	*ACH 6)		W. KLUG	*	
		E DRBITER MO 2-0 IN THE N					, AND SI RMOCOUPI				*	,	* 	*-DN	15	*	
		ANGLEY RESEA	- •				M THE M		I A.*			,	** •	*		*	
		NTER 20-INC				*	4 1115 M	30 E F	-∓ xk		*	,	*	т ж		*	
		6 TUNNEL (*			*		*	,	*	*		*	
	*7)		*			*			Ψ.		*	2	*	*		*	
	*		*			*			*		*	,	*	*		*	
C .	- *SP	PACE SHUTTLE	LRS*L	RSI	(THIN TILE)	*T0	EVALUAT	E THE	E+P	RESSURE	+ 0.83	3- :	*ROCKWELL/	*R E	. KINGSLAND/R	O*DMS	-DR-2470
	* * I	THIN TILE T	EST *			*FFE	CTS OF .	AN EXP	PΑ+		* 0 88	8 ;	*ARC -	*CKV	VELL	*	
5-1		N THE NASA/A				*NSI	ON/RECO	MPRESS	5I*		*	3	*11-FOOT TRANS	50*C.	BERTHOLD/ROCK	₩ *	
3 1 A		SEARCH CENT					SHOCK O				*		*NIC WIND TUNN			*	
-167,69		(11-FOOT UNI					OF LOW				*		*L (UNITARY)	_	R HOULIHAN	*	
		AN WIND TUN					RE REUS				*	!	*	*G.		*	
	=	SING TEST FI	–				CE INSU				*	:	*	*-DI	MS	*	
	* 12 1	96-0 (OS31	A) *			•	SI) THI				*	;	*	*		*	
	*		*				JLATING ON OF TI				* *		** -	*		*	
	*		*				HUTTLE 1						τ ±	*		*	
	*		*				R THE C				*	,	*	*		*	
	*		*			*	· 1112 O	1101 1	*		*	:	*	*		*	
·C	- *RE	SULTS OF EX	PERI*			*TO 1	DBTAIN	FORCE	A*F	ORCE	*0 60	_	*ROCKWELL/	*A.F	R.KANEVSKY/RI	*DMS	-DR-2476
TWT -	- *ME	NTAL INVEST	IGAT*							RESSURE	*2 5		*ARC -		E VAUGHN	*	
1-1,2,3	3/*10	INS TO DETER	MINE*			*0N	ET PROT	JBERAN	* V		*	•	*11-FOOT TRANS	SO*H.	C ZIMMERLE	*	
		KTERNAL TANK					AND TO		*		*		*NIC WIND TUN	4E * - D۱	4S	*	
190A		ROTUBERANCE					ERMINE				*		*L (UNITARY)	*		*	
190B	_	USING A 0.0					AETOCI.				*		*9-FOOT BY 7-1			*	
		E MODEL OF					UPPER S				*		*OT SUPERSONI			*	0
		PACE SHUTTLE				*NEA	R CENTE	KLINE	*		*		*WIND TUNNEL *	,∪ *		*	OF POOR
		AUNCH CONFIG ON (MODEL 47				# -			*		*	:	*NITARY)	* *		*	177
		IN THE NASA				*			* •		* •	;	τ ⋆	*		*	Ö
		JIN THE NASA VITARY PLAN	* JAKU			*			*		*		*	*		*	<u> </u>
		IND TUNNEL (*			*		*	,	· *	*		*	
		1/B)	*			*			*		*		*	+		*	
	*	= 1	*			*			*		*	:	*	*		*	Č
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																	Ţ

					WINE	WORK TUNNEL TEST		PROCESS DMS DATA	PROCES	SSING					355
			 *		*		*		*MODEL	 -	*	*	COGNIZANT	+ BA	SIC
TEST	*		*	CONFIGURATIONS	*	TEST	*	TYPE OF			* TESTING	*	TEST DMS		CATIONS
ID	*	REPORT TITLE		TESTED	*	PURPOSE	*	TEST	*MACH	RANGE	* AGENCY	* 	PERSONNEL	*OR CO	MMENTS
			TC	mm t tro . T AANV	T0	OBTAIN CONVE	~T+D	nteeline	*0 01	75 /	*ROCKWELL/	* € 1	L BERTHOLD,RI	*DMS-DI	2-2480
ARC 3.5HWT		RESULTS OF HEAT RANSFER TESTS ON	-			HEAT-TRANSF		KESSUKE	* 5.3		*ARC -		R NAKAMOTO,RI	*	. 2.150
250		HE SPACE SHUTTL				E DISTRIBUTION			* 73		*3 5-FOOT HY			*	
IH104		SECOND STAGE ASC				ON THE UPPER			*		*SONIC WIND			*	
211101		NT VEHICLE AT F				EL OF THE SP			*		*NEL	*		*	
		ESTREAM MACH=5			*E 5	HUTTLE EXTER	VA*		*		*	*		*	
		ND 7 3 IN THE N			*L 1	ANK FOR SECO	VD*		+		*	*		*	
	* <u>A</u>	SA/ARC 3 5-FOOT	*		*ST/	GE ASCENT CO	* 1		*		*	*		*	
	}	INT USING THE O.	0			TIONS AT ATTI			*		*	*		*	
		75-SCALE MODEL	6*			NOT ATTAINED			*		+	*		*	
	*0)-OT(IH104)	*			ING PREVIOUS	T*		*		*	*		*	
	*		*		*EST	S	*		*		*	*		*	
	*		*		*		* -	CD CE	*	/	* 41.400 /	** 1	E. VAUGHN	*DMS-Di	22404
LTV	- *			V102-SSME ON	*		*F	ORCE	* 25		*LARC /		W KLUG	*DM2-D1	X-2484
HSWT	* *			V102-SSME OFF	*		*		* 4 75		*LTV - *HIGH SPEED !			*	
742	/*			V102-SSME ON VT	*		- *		* 4 /		*D TUNNEL	* #114** Di	43	*	
LA 144	*		*U	FF	# 		T.		•		* 10141466	*		*	
AEDC	- *E	SECISITE DE TANGE	т∗¤	75C16E64F16FD3FF	*Tn	VEDIEV ODBIT	~ FD*F	DRCE	*0 020	1	*ROCKWELL/	*R I	H BURT/ARVIN/	C*DMS-DI	R-2491
HWTB				2HG1M52N108N109N				01100	* 6 (+AEDC -		SPAN	*VOLUMI	
V41B-H0	-		-	10N111R20V27VT10	_				*	•			MANSFIELD/R	I *	
0A258				T11VT12VT13VT14V					*		*D TUNNEL (B) *,M9	SFC	*	
				15VT16VT17W131					*		*	*5	R HOULIHAN	*	
		E ORBITER MODEL				IN THE MACH			*		*	*G	W. KLUG	*	00
	* 1	06-0 IN THE USA	F*		*T0	8 REGIME, TO	I *		*		*	*-D1	MS	*	71 Z
	*/	AEDC VKF TUNNEL	*		*NVE	STIGATE THE	- ∮ Y*		*		*	*		*	තු බි
	*E	3 (DA258)	*			SONIC STABIL			*		*	*		*	ORIGINAL OF POOR
	*		*			ERIVATIVE AND			*		*	*		*	o ≅
	*		*			ES ENCOUNTER			*		*	*		*	20 17
	+		*			TESTS LA141			*		*	**		*	O m
	*		*			44, & PROVID			*		77 st.	· τ		*	PAGE I
	*		*			H-ACCURACY FO			*		* *	*		*	≥ 🖭
	*		*			E & MOMENT HYI INIC DATA	* <u> </u>		*		*	*		*	ingl
	**		*		*K2(MIC DATA	*		*		+	*		*	₹ 76
	*		*		*		~				•				- Un

	WORK IN PROCESS WIND TUNNEL TEST / DMS DATA	PROCESSING	356
TEST + * CONFIGURATIONS ID * REPORT TITLE * TESTED	S * TEST * TYPE OF	*MODEL * * SCALE* TESTING *MACH RANGE* AGENCY	* COGNIZANT * BASIC * TEST DMS *PUBLICATIONS * PERSONNEL *OR COMMENTS
AEDC - *RESULTS OF INVEST*B75C16E64F16FD3F HWTB - *IGATIONS ON THE O*22HG1M52N108N109 V41B-HO /*.020-SCALE OV-102*110N111R20V27VT1 0A258 *CONFIGURATION SP *VT11VT12VT13VT14 CR-167,660*ACE SHUTTLE VEHIC*T15VT16VT17W131 *LE ORBITER MODEL * *106-O IN THE USAF* */AEDC VKF TUNNEL * * * * * * * * * * * * *	PN*STATIC STABILITY * 10*CHARACTERISTICS, * 4V*THE LATERAL DIRE * *CTIONAL TRIM LIMI* *TS IN THE MACH 6 * *TO 8 REGIME, TO I* *NVESTIGATE THE HY* *PERSONIC STABILIT* *Y-DERIVATIVE ANOM* *ALIES ENCOUNTERED* *IN TESTS LA141 & * *LA144, & PROVIDE * *HIGH-ACCURACY FO * *RCE & MOMENT HYPE* *RSONIC DATA * * ** *****************************	* *D TUNNEL (B) * * * * * * * * * * * * * * *	*S R HOULIHAN * *G W. KLUG * *-DMS * * * * * * * * * * * * * * * * * * *

			WIND TUNNEL TES	T / DMS DA	A PROCESSING			357
	*	*	*	*	*MODEL	*	* COGNIZANT	* BASIC
TEST	*	* CONFIGURATIONS	* TEST	* TYPE (F * SCAL		* TEST DMS	*PUBLICATIONS
10	* REPORT TITLE	* TESTED	* PURPOSE	* TEST	*MACH RANG	E≁ AGENCY	* PERSONNEL	*OR COMMENTS
			D. TO VERIEV CORT	TED. F000F	*0.000 /	*ROCKWELL/	*R H. BURT/ARVIN	1/C+DMS-DD-2/91
		ST*B75C16E64F16FD3F O*22HG1M52N108N109			*0 020 / * 6.0	*ROCKWELL/	*ALSPAN	*VOLUME 04
		0*22HG (M52N (O6N (O8 02+ 10N 11R20V27VT			* 0.0		IN*A C MANSFIELD	
DA258		P *VT11VT12VT13VT14			4	*D TUNNEL (B)		*
		IC*T15VT16VT17W131			*	*	*S. R HOULIHAN	*
OK 101,00	*LE ORBITER MODE		*TS IN THE MACH		*	*	∗G. W KLUG	*
	* 106-0 IN THE US		*TO 8 REGIME, T	O I*	*	*	*-DMS	*
	*/AEDC VKF TUNNEL		*NVESTIGATE THE	HY*	*	*	*	*
	*B (0A258)	*	*PERSONIC STABI	LIT*	*	*	*	*
	*	*	*Y-DERIVATIVE A	NOM+	*	*	*	*
	*	*	*ALIES ENCOUNTE		*	*	*	*
	*	*	*IN TESTS LA141		*	*	*	*
	*	*	*LA144, & PROVI		*	*	*	*
	*	*	*HIGH-ACCURACY		*	*	-	•
	*	*	*RCE & MOMENT H	YPE*	*	*	* •	,
	*	**	*RSONIC DATA	*	* *	*	**	*
4 EDC -	* * PECHITE OF INVE	* ST*B75,C16,E64,F16,		VEC*EUDUE	*0 010 /	*ROCKWELL/	*R.H BURT.W. CF	RDS+DMS-DR-2493
		0+52,N108,N109,N11			+ 60-	*AEDC -	*BY,J T. BEST/AS	
		02*,N111,R20,V27.W1			*	*HYPERSONIC W		*
	/*CONFIGURATION SI		*AL DIRECTIONAL		*	*D TUNNEL (B)	•	vf E*
DA259	*ACE SHUTTLE VEH		*ABILITY ANOMAL		*	*	* NICHOLS/RI	*
	5+LE ORBITER MODE		*ORIGINALLY ENC		*	*	*S. R HOULIHAN	*
,	*72-0 IN THE NAS		*NTERED IN TEST	S L*	*	*	*G W. KLUG	*
	AEDC VKF TUNNEL	B	*A141,LA144, AN	D 0 +	*	*	*-DMS	*
	* (OA259)	*	*A258	*	*	*	*	*
	*	*	*	*	*	*	*	*
AEDC -	*RESULTS OF INVE	ST*B75,C16,E64,F16,	M*TO CONTINUE IN	VES*FORCE		*ROCKWELL/	*R.H BURT,W. CF	
HWTB -	*IGATIONS OF THE	0+52,N108,N109,N11	O+TIGATIONS OF T	HE *	* 60-	*AEDC -	*BY.J T. BEST/A	
		02*,N111,R20,V27,W1			*	*HYPERSONIC W		*
	/*CONFIGURATION S		*AL DIRECTIONAL		4	*D TUNNEL (B)	*R H. SPANGLER, N * NICHOLS/RI	4
DA259	*ACE SHUTTLE VEH		*ABILITY ANOMAL		τ •	*	*S R HOULIHAN	. OO
CR-167,66	6*LE ORBITER MODE		*ORIGINALLY ENC *NTERED IN TEST		* •	*	*G W. KLUG	· 市药
	*72-0 IN THE NASA		*A141, LA144, AN		*	*	*-DMS	* 77 🛱
	*AEDC VKF TUNNEL	• *	*A258	*	*	*	*	CRIGINAL OF POOR
	*	**	*A250	*	*	*	*	* Ō\$
	77		•	•				70 Fm
								PAGE QUAL
								≥ 🖸

						WIND	TUNNEL TES		DMS DATA	PROCES	SSING					35	58
	*		1	 r		*	·	*		+MODE!	 L *	 *	*	COGNIZANT	*	BASIC	
TEST	*		k	* CONFI	GURATIONS	*	TEST	*	TYPE OF	+	SCALE	* TESTING	*	TEST DMS	*PU	BLICATION	15
1D	* 	REPORT	TITLE *	* Т	ESTED	*	PURPOSE	*	TEST	+MACH	RANGE	AGENCY	*	PERSONNEL	*0R	COMMENTS	}
EDC	- *	•	1	ORBITER	FOREBODY	*TO 6	BTAIN CALI	BRA*I	FORCE	*0.25	- ,	*ROCKWELL/	*S	R. HOULIHAN	*DM	IS-DR-2497	7
WT16T	- *		*	k			DATA FOR			*1 50		+AEDC -		C. ZIMMERLE	*		
94	/*		4	k		*FLUS	H-ORIFICE	SH *		*		*TRANSONIC P			*		
A34	*		4	r		*UTTU	E ENTRY AL	R *		*	*	*ULSION WIND	TU*		*		
	+		и	ı.			SYSIEM IN			*		NNEL (PWT-1			*		
	*		*	k			JBSOILC/TRA			*	5	*	*		*		
	*		к	۲			PANGE	*		*	•	*	*		*		
	*		*	r		+		*		*	*	*	*		*		
ARC	- *	RESULTS (DF SPACE *	102 (PR	ELIMINARY)	*RCS	JET INTERA	CTI*	FORCE	* 0 0	125 / *	*ROCKWELL/	*J.	MARROQUIN/RI	*DM	S-DR-2498	3
PWT			ORBITER (+				FFECTS	*		*2 5	- *	LARC -	*J.				
311	/*	MODEL 70	-O) LATE *	ĸ		*		*		*4 5	*	UNITARY PLA	N W*S		*		
677	- *	ENTRY RC	S YAW JET*	k		*		*		*	3	*IND TUNNEL	ل∗	E VAUGHN	*		
358	/+	EFFECTS	TESTS IN +	k		*		*		*	4	*16-FOOT TRA	NSO*-DI	MS	*		
A255	*	THE NASA,	/LARC UP +	۲		*		+		*	•	NIC TUNNEL	*		*		
A256	*	WT AND 1	6-FT WIN+	٠		*		*		*	*	k	*		*		
R-167.	656*	D TUNNELS	S (OA255/+	k		*		*		*	,	*	*		*		
	*	OA256)	•	*		*		*		*	,	*	*		*		
	*		*	k		*		*		*	,	*	*		*		
RC	- *		*	k		*		*	FORCE	*	,	*ROCKWELL/	*S	R. HOULIHAN	*DM	IS-DR-2507	7_
1TWT	- *		*	k		*		*		*	,	*ARC -	*B.	J BURST	*		2
10-1	/*		*	k		*		*		*	,	*11-FOOT TRA	NSO*-DI	MS	*		•
7SWT	- *		*	t .		*		*		*	,	*NIC WIND TU	NNE*		*		-
B\AEEAI	*		*	•		*		*		*	,	*L (UNITARY)	*		*		•
	*		*	k		*		*		*	,	*9-FOOT BY 7	-F0*		*		OF 100:
	*		:	k		*		*		*	3	*OT SUPERSON	IC *		*		
	*		*	*		*		*		*		*WIND TUNNEL	(U*		*		
	*		*	ĸ		*		*		*	,	+NITARY)	*		*		•
	*		*	•		*		*		*	,	*	*		*		1
RC	- *		*	•		*		*[PRESSURE	*		*ROCKWELL/	*5	R. HOULIHAN	*DM	IS-DR-2511	1
1TWT	- *		*	k		*		+		*	3	*ARC -	*B.	J BURST	*		
61-1	/*		*	ŧ		*	•	*		*	,	*11-FOOT TRA	NSO + - DI	MS	*		
A300	*		*	۲		*		*		*	,	*NIC WIND TU	NNE*		*		
	*		+	e e		*		*		*	,	*L (UNITARY)	*		*		
															.4.		

Table 6-1
Space Shuttle Facility Wind Tunnel Summary

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SPACE SHUTTLE FACILITY WIND TUNNEL SUMMARY								
TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ION DATE	
KT				LA 126	2436,V-06	AUGUST.	1978	
 vu	AEDC	 НWТВ				 May.	1077	
			B7A		2356	•	1977	
VB	AEDC	HWTB	B8A	OH74	2263	MARCH,	1976	
VC	AEDC	HWTB	C4A	IA114	2272,V-01	JUNE,	1977	
VC	AEDC	HWTB	C4A	IA114	2272,V-02	JUNE,	1977	
۸ŋ	AEDC	HWTB	D8A	OA 169	2320,V-01	FEB ,	1978	
۸٩	VEOC	HWTB	D8A	OA 169	2320,V-02	FEB ,	1978	
VJ	AEDC	HWTB	D8A	OA 169	2320,V-03	FEB.,	1978	
vĸ	AEDC	HWTB	D9A	I A 2 2	2327.V-01	JULY,	1977	
vĸ	AEDC	HWTB	D9A	IA22	2327,V-02	AUGUST,	1977	
VK	AEDC	HWTB	D9A	IA22	2327,V-03	AUGUST,	1977	
VG	AEDC	HWTB	E3A	0H75	2303	MAY,	1976	
VS	AEDC	HWTB	J7A	0H98	2340`, V-01	SEPT ,	1980	
vs	AEDC	HWTB	J7A	0Н98	2340,V-02	SEPT.,	1980	
45	AEDC	HWTB	P4A	OH90A/MA29	2451	MAY,	1979	
4D	AEDC	нитв	TOA	IA148	2384,V-01	SEPT ,	1978	
4D	AEDC	нитв	TOA	IA148	2384,V-02	SEPT ,	1978	
тм	AEDC	HWTB	VA289	OH3A	2100	JUNE,	1974	
TT	AEDC	HWTB	VA352	OH4A	2154	, NAG	1975	
TZ	AEDC	HWTB	VA352	DH4C	2225	MARCH.	1975	

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
тк	AEDC	HWTB	VA352	OH4B	2099,V-01	FEB ,	1975
TK	AEDC	HWTB	VA352	ОН4В	2099,V-02	FEB ,	1975
ΤK	AEDC	нwтв	VA352	он4в	2099,V-03	FEB .	1975
V5	AEDC	HWTB	VA353	0Н9	2251	JUNE,	1975
TS	AEDC	HWTB	VA354	OH11	2141	JUNE,	1975
v 3	AEDC	HWTB	VA422	IA17B	2230	FEB ,	1975
TR	AEDC	HWTB	VA422	IA17A	2156,V-01	AUGUST,	1975
TR	AEDC	HWTB	VA422	IA17A	2156,V-02	AUGUST,	1975
TR	AEDC	HWTB	VA422	IA17A	2156,V-03	AUGUST,	1975
TN	AEDC	HWTB	VA474	0A77	2134,R-01	JAN ,	1975
VE	AEDC	нพтв	VA526/21BA	OH5OA	2285	APRIL,	1976 '
VM	AEDC	HWTB	V41B-E9A	OH69	2321,V-01	AUGUST,	1978
VM	AEDC	нштв	V41B-E9A	OH69	2321,V-02	AUGUST,	1978
4 Z	AEDC	HWTB	V41B-G9	0H109	2490.V-01	JULY,	1982
4Z	AEDC	HWTB	V418-G9	òнiоа	2490,V-02	JULY,	1982
4Z	AEDC	HWTB	V41B-G9	OH109	2490,V-03	JULY,	1982
Tf	AEDC	нмтв	V41B-H0	OA258	2491,V-01	IN PROCES	SS
T1	AEDC	нитв	V4 1B-H0	OA258	2491,V-02	IN PROCES	SS
T1	AEDC	HWTB	V41B-H0	OA258	2491,V-03	IN PROCES	SS
T1	AEDC	нитв	V41B-H0	OA258	2491,V-04	IN PROCES	S
44	AEDC	HWTB	V41B-K3A	OH57A/B	2367	MAY,	1979
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TEST				NASA			
CODE	FACILITY	SUBFACILITY	TEST NO.	SERIES NO.	DMS-DR-	PUBLICATI	ON DATE
нт	AEDC	HWTB	V41B-R3A	0H56	2410	JUNE,	1979
4E	AEDC	HWTB	V41B-R4A	OH84A	2388	IN PROCES	ss
4H	AEDC	HWTB	V41B-V2A	OH103A	2420	NOV ,	1982
4M	AEDC	HWTB	V41B-V2C	0H103B	2427	IN PROCES	ss
т 6	AEDC	HWTB	V41B-1C	OH111	2496,V-01	NOV ,	1982
Т6	AEDC	HWTB	V41B-1C	OH111	2496,V-02	NOV.,	1982
Т6	AEDC	HWTB	V41B-1C	OH111	2496,V-03	NOV ,	1982
4U	AEDC	HWTB	V41B-67	OH84B	2464,V-01	AUGUST,	1981
4U	AEDC	HWTB	V41B-67	0H84B	2464.V-02	AUGUST,	1981
4U	AEDC	HWTB	V41B-67	0H84B	2464,V-03	AUGUST,	1981
4U •	AEDC	НШТВ	V41B-67	0H84B	2464,V-04	AUGUST,	1981
4V	AEDC	HWTB	V41B-67	0H105	2464,V-05	AUGUST,	1981
тз	AEDC	HWTB	V42B-/V43B	OA259	2493,V-01	IN PROCES	SS
тз	AEDC	HWTB	V42B-/V43B	OA259	2493,V-02	IN PROCES	SS
T2	AEDC	HWTB	V43B-17	OH107	2492	JUNE,	1982
4 T	AEDC	HWTB	41B-65	0H102A	2455	JUNE,	1979
VY	AEDC	HWTB	41B-83A	0H25B	2366	MAY,	1977
TP	AEDC	HWTB	48A	LA42	2132	MAY,	1975
vo	AEDC	HWTB	524	OH52	2330	DCT ,	1976
V1	AEDC	HWTB	57A	0H49B	2222,V-01	DCT ,	1976
V1	AEDC	HWTB	57A	0H49B	2222,V-02	NOV ,	1976
			J/M	J114 9B	4242, V -UZ	1404 1	12

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			SPACE SHUT	TLE FACILITY	WIND TUNNEL S	UMMARY		
	TEST				NASA			
	CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATIO	N DATE
	VL	AEDC	HWTB	58A	OH5OB	2358	JUNE,	1977
	TW	AEDC	нутв	71A	0A79	2196	MAY,	1975
	V9	AEDC	HWTB	74A	0H39	2241,V-01	JULY,	1980
	V9	AEDC	HWTB	74A	OH39	2241,V-02	JULY,	1980
	V9	AEDC	н⊌тв	74A	0H39	2241,V-03	JULY,	1980
	V9	AEDC	HWTB	74A	OH39	2241,V-04	JULY,	1980
	VH	AEDC	HWTB	82A	OH54A	2301	MAY,	1976
	VM	AEDC	HWTB	82A	OH54B	2342	JUNE,	1977
	V6	AEDC	HWTB	834	OH25A	2252	JULY,	1975
	тх	AEDC	HWTF	VA291	FH10	2197	OCT ,	1974
	то	AEDC	HWTF	VA489	OA81	2152,R-01	JAN ,	1976
	TY	AEDC	HWTF	25A	THIF	2218	SEPT ,	1977
	VA	AEDC	HWTF	28A	OA 160	2247	JAN.,	1976
	7T	AEDC	PWT16T	TF-551	OS46A-G	2505	AUGUST.	1982
	T5	AEDC	PWT16T	TF-556	0\$49	2483,V-01	JUNE,	1982
	T5	AEDC	PWT16T	TF-556	0549	2483,V-02	JUNE,	1982
	T8	AEDC	PWT 16T	TF-608	0556	2489	JUNE,	1982
	VR	AEDC	PWT 16T	431	0A232	2414.V-01	MAY,	1980
	VR	AEDC	PWT16T	431	0A232	2414,V-02	MAY,	1980

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TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES ND.	DMS-DR-	PUBLICAT	ION DATE
4B	AEDC	PWT16T	470	IA 105A	2398,V-01	NOV ,	1981
4C	AEDC	PWT16T	470	IA 156A	2403,V-01	JAN.,	1981
4 B	AEDC	PWT 16T	470	IA105A	2398,V-O2	NOV ,	1981
4C	AEDC	PWT 16T	470	IA 156A	2403,V-02	JAN.,	1981
4B	AEDC	PWT 16T	470	IA 105A	2398,V-03	NOV .	1981
4C	AEDC	PWT 16T	470	IA156A	2403,V-03	JAN .	1981
4R	AEDC	PWT 167	505	IA132	2449	FEB .	1981
4N	AEDC	PWT16T	507	GA129	2434	DEC .	1979
4 P	AEDC	PWT16T	517	IA182	2439	IN PROCE	ss
4 Q	AEDC	PWT16T	519	IA183	2444,V-01	APRIL,	1981
4Q	AEDC	PWT 16T	519	IA183	2444,V-02	APRIL,	1981
4 Y	AEDC	PWT16T	572	OA253	2486,V-01	ост,	1982
4Y	AEDC	PWT16T	572	OA253	2486,V-02	ост ,	1982
Т4	AEDC	PWT 16T	594	MA34	2497	IN PROCE	ss
VP	AEDC	PWT4T	ЕЗА	SA16F	2334	NOV ,	1976
V8	AEDC	SWTA	АЗА	IA111	2242,V-01	MARCH,	1976
v8	AEDC	SWTA	AEA	IA111	2242,V-02	MARCH,	1976
V7	AEDC	SWTA	A4A	IH41A	2240	APRIL,	1977
VF	AEDC	SWTA	A4A	IH41B	2295, V-01	SEPT ,	1977

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CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATI	ION DATE
VF	AEDC	SWTA	Λ4Α	IH41B	2295,V-02	SEPT ,	1977
VF	AEDC	SWTA	A4A	IH4 1B	2295,V-03	SEPT ,	1977
VF	AEDC	SWTA	A4A	IH41B	2295.V-04	DCT .	1977
VF	AEDC	SWTA	A4A	IH41B	2295,V-05	OCT ,	1977
σV	AEDC	ATWZ	E1A	FH13	2276	JUNE.	1977
VI	AEDC	SWTA	AEL	IH47	2312,V-01	JUNE,	1977
VI	AEDC	SWTA	AEU	IH47	2312,V-02	JULY,	1977
VT	AEDC	SWTA	K1A	1440	2293	DEC ,	1977
VQ	AEDC	SWTA	K1A	IA142	2346,V-01	, NAU	1978
VQ	AEDC	SWTA	KIA	IA142	2346,V-02	JAN .	1978
VQ	AEDC	SWTA	K1A	IA142	2346,V-03	JAN.,	1978
VX	AEDC	SWTA	A89	14143	2354,V-01	FEB ,	1978
vx	AEDC	SWTA	P8A	IA143	2354,V-02	FEB .	1978
vx	AEDC	SWTA	P8A	IA143	2354,V-03	FEB ,	1978
vx	AEDC	SWTA	P8A	IA143	2354,V-04	FEB.,	1978
TJ	AEDC	SWTA	VA323	IA13	2062,V-01	AUGUST,	1975
Тđ	AEDC	SWTA	VA323	EA13	2062,V-02	AUGUST,	1975
ТJ	AEDC	SWTA	VA323	[A13	2062,V-03	AUGUST,	1975
TL	AEDC	SWTA	VA422	1457	2112	, עמא	1974
ΤQ	AEDC	SWTA	VA422	1A61A	2143	FEB ,	1976
V4	AEDC	SWTA	VA422/21AA	IA61B	2226	FEB .	1975

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TEST				NASA			
CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATI	ON DATE
vw	AEDC	SWTA	VA525/218A	0H49A	2355	JUNE,	1977
4ป	AEDC	SWTA	V41A-P5A	OA208/209	2415,V-02	JAN ,	1980
vz	AEDC	SWTA	V41A-R2A	IH72	2372	NOV	1981
4L	AEDC	SWTA	V41A-W5	IH85	2431,V-01	APRIL,	1980
4L	AEDC	SWTA	V41A-W5	IH85	2431,V-02	APRIL,	1980
4L	AEDC	SWTA	V41A-W5	1H85	2431,V-03	APRIL,	1980
4 L	AEDC	SWTA	V41A-W5	IH85	2431,V-04	APRIL,	1980
4L	AEDC	SWTA	V41A-W5	IH85	2431,V-05	MAY,	1980
4L	AEDC	SWTA	V41A-W5	IH85	2431,V-06	MAY,	1980
4L	AEDC	SWTA	V41A-W5	IH85	2431,V-07	MAY,	1980
4L	AEDC	SWTA	V41A-W5	IH85	2431,V-08	APRIL,	1980
4K	AEDC	SWTA	V41A-20	FH15	2422	APRIL,	1979
4W	AEDC	SWTA	V41A-67	IH102	2464,V-06	AUGUST,	1981
4 I	AEDC	SWTA	V41B-P5A	OA208/209	2415,V-01	JAN ,	1980
4X	AEDC	SWTA	V41B-65	DH400	2472	MAY,	1980
τυ	AEDC	SWTA	60A	1487	2192,V-01	JULY,	1975
TU	AEDC	SWTA	60A	1A87	2192,V-02	JULY,	1975
τv	AEDC	SWTA	71A	OA115	2198	JULY,	1975
AW	ARC		549-1	DA307A/B	2509	DEC ,	1982
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SPACE SHUTTLE FACILITY WIND TUNNEL SUMMARY								
TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE	
NF	ARC	1 1 T W T			2255	JULY,	1975	
EU	ARC	11TWT	014	IA19	2170,V-01	JUNE,	1975	
EU	ARC	f 1TWT	014	IA19	2170,V-02	JUNE,	1975	
EŪ	ARC	11TWT	014	IA19	2170,V-03	JUNE,	1975	
ET	ARC	11TWT	019	IA81A	2169,V-01	, NAU	1976	
ET	ARC	11TWT	019	A18AI	2169, V-02	JAN ,	1976	
ET	ARC	11TWT	019	1A81A	2169,V-03	JAN ,	1976	
ET	ARC	117WT	019	IA81A	2169,V-04	, NAU	1976	
ET	ARC	11TWT	019	IA81A	2169.V-05	JAN ,	1976	
ЕТ	ARC	11TWT	019	IA81A	2169,V-06	, MAU	1976	
ЕТ	ARC	11TWT	019	AFBAI	2169.V-07	, NAG	1976	
E4	ARC	1 1 TWT	023	1480	2212,V-01	ост ,	1976	
E4	ARC	1 1 T W T	023	OBAI	2212,V-02	OCT.,	1976	
E4	ARC	11TWT	023	08AI	2212,V-03	DCT ,	1976	
E4	ARC	1 1TWT	023	OBAI	2212,V-04	ост ,	1976	
NE	ARC	1 1 T W T	072	IA72	2258,V-01	APRIL,	1977	
NE	ARC	1 1 TWT	072	1A72	2258,V-02	APRIL,	1977	
NE	ARC	11TWT	072	1A72	2258,V-03	APRIL,	1977	
NE	ARC	1 1TWT	072	IA72	2258.V-04	APRIL,	1977	
NE	ARC	1	072	1A72	2258.V-05	APRIL,	1977	
NE	ARC	11TWT	072	1A72	2258,V-06	APRIL,	1977	

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TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ION DATE
NE	ARC	11TWT	072	IA72	2258,V-07	APRIL,	1977
NE	ARC	11TWT	072	IA72	2258,V-08	APRIL,	1977
NE	ARC	11TWT	072	IA72	2258,V-09	APRIL,	1977
E8	ARC	11TWT	073	OA 148	2254,V-01	JULY,	1976
E8	ARC	11TWT	073	OA 148	2254,V~02	JULY.	1976
E8	ARC	11TWT	073	OA 148	2254.V-03	JULY.	1976
E8	ARC	1 1 TWT	073	DA 148	2254,V-04	AUGUST,	1976
E8	ARC	11TWT	073	OA 148	2254,V-05	AUGUST,	1976
E8	ARC	1 1 TWT	073	OA 148	2254,V-06	AUGUST,	1976
E8	ARC	1 1 T W T	073	OA 148	2254,V-07	AUGUST,	1976
E8	ARC	11TWT	073	DA 148	2254,V-08	AUGUST,	1976
E8	ARC	11TWT	073	OA 148	2254,V-09	SEPT ,	1976
E 8	ARC	11TWT	073	OA 148	2254,V-10	SEPT .	1976
E8	ARC	11TWT	073	OA 148	2254,V-11	SEPT ,	1976
E8	ARC	1 1 TWT	073	OA 148	2254,V-12	SEPT ,	1976
E8	ARC	11TWT	073	OA 148	2254,V-13	SEPT .	1976
2K	ARC	11TWT	115	DA 149A	2376,V-O†	JAN ,	1980
2K	ARC	11TWT	1 15	OA 149A	2376,V-02	JAN ,	1980
2K	ARC	1 1 TWT	115	DA 149A	2376,V-03	JAN.,	1980
2F	ARC	1 1 TWT	118-1	OA 145A	2380.V-01	DEC ,	1980
2F	ARC	1 1 TWT	118-1	OA 145A	2380,V-02	DEC .	1980

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
2F	ARC	f 1TWT	118-1	OA 145A	2380,V-03	DEC ,	1980
2F	ARC	1 I TWT	118-1	OA 145A	2380,V-04	DEC ,	1980
2F	ARC	11TWT	118-1	OA 145A	2380,V-05	DEC.,	1980
2 F	ARC	11TWT	118-1	OA 145A	2380,V-06	DEC ,	1980
A1	ARC	11TWT	145-1	0531A	2470	IN PROCES	S
2A	ARC	11TWT	187-1	OA 175	2333,V-01	NOV ,	1977
2A	ARC	11TWT	187-1	OA 175	2333,V-02	DEC .	1977
2A	ARC	1 1 TWT	187-1	OA 175	2333,V-03	DEC ,	1977
28	ARC	11TWT	200-1	LA77	2344,V-01	JAN ,	1980
2 B	ARC	11TWT	200-1	LA77	2344,V-02	, NAL	1980
2E	ARC	11TWT	213-1	LA89	2353	JUNE,	1981
2N	ARC	11TWT	228-1	IA144	2377,V-01	APRIL,	1982
2N	ARC	† 1TWT	228-1	IA144	2377.V-02	APRIL,	1982
2R	ARC	1 1TWT	275-1	IA119	2404,V-01	ост ,	1980
2R	ARC	11TWT	275-1	IA119	2404,V-02	ост ,	1980
2R	ARC	11TWT	275-1	IA119	2404,V-03	ост ,	1980
2R	ARC	11TWT	275-1	IA119	2404,V-04	ост ,	1980
3L	ARC	1 1 T W T	369-1	0536	2458	IN PROCES	S
30	ARC	11TWT	380-1	0541	2463	IN PROCES	S
АМ	ARC	11TWT	380-1	0543	2487	ост ,	1982
สก	ARC	1 1 T W T	411-1,2,3	IA190A	2476	IN PROCES	s
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CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO.	DMS-DR-	PUBLICATI	ON DATE
AA	ARC	11TWT	412~1	IA191	2378	MARCH.	1981
AC	ARC	1 1 T W T	425	0550	2485	JUNE.	1982
эх	ARC	1 1TWT	427-1/427-	0A400	2482,V-01	JAN .	1981
3X	ARC	11TWT	427-1/427-	UA400	2482,V-02	JAN.,	1981
3X	ARC	1 1 T W T	427-1/427-	0A400	2482,V-03	JAN ,	1981
AB	ARC	1 1 T W T	436-2	0S52	2447	IN PROCES	
AS	ARC	11TWT	500.07.31	0560,1,2,3	2506	DEC .	1982
AP	ARC	11TWT	501-1	05304A	2501	ост,	1982
AL			503-1	05304A 05302A	2469	JUNE.	1982
AU	ARC	1 1 T W T	510-1	MA33A/B	2507	IN PROCES	
	ARC	1 1TWT		•		JAN ,	1983
AV	ARC	11TWT	548-1	DS306A/B	2508	·	1982
AY	ARC	1 1TWT	548-1	0\$309A	2510	DEC ,	
AZ	ARC	1 1TWT	561-1	IA300	2511	IN PROCES	
Bľ	ARC	1 1TWT	686	IA7	2024	AUGUST,	1973
EX	ARC	11TWT	705	OS8A/B	2179	NOV.,	1977
B-	ARC	1 1TWT	707	IA9A,B,C	2032,V-01	NOV ,	1973
8-	ARC	1 1TWT	707	IA9Ă,B,C	2032,V-02	NOV ,	1973
В-	ARC	1 1TWT	707	IA9A,B,C	2032,V-03	OCT ,	1973
B-	ARC	1 1TWT	707	IA9A,B,C	2032,V-04	DEC .	1973
B-	ARC	11TWT	707	IA9A,B,C	2032,V-05	DEC .	1973
B-	ARC	1 1TWT	707	IA9A,B,C	2032,V-06	DEC ,	1973
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TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO.	DMS-DR-	PUBLICAT	ION DATE
B-	ARC	1 1 T W T	707	IA9A,B,C	2032,V-07	DEC .	1973
8-	ARC	11TWT	707	IA9A,B,C	2032,V-08	DEC ,	1973
B-	ARC	1 1 T W T	707	IA9A,B,C	2032,V-09	JAN ,	1974
8-	ARC	1 1 TWT	707	IA9A,B,C	2032,V-10	JAN ,	1974
B-	ARC	11TWT	707	IA9A,8,C	2032,V-11	JAN ,	1974
В-	ARC	1 1 TWT	707	IA9A,B,C	2032,V-12	JAN ,	1974
B-	ARC	1 1 T W T	707	IA9A,B,C	2032,V-13	MARCH.	1974
8-	ARC	1 1TWT	707	IA9A,B,C	2032,V-14	MARCH.	1974
B-	ARC	1 1 T W T	707	IA9A,B,C	2032,V-15	MARCH.	1974
B-	ARC	11TWT	70 7	IA9A,B,C	2032,V-16	APRIL,	1974
8-	ARC	11TWT	707	IA9A,B,C	2032,V-17	APRIL,	1974
B-	ARC	1 1 T W T	707	IA9A,B,C	2032,V-18	MAY,	1974
B2	ARC	1 1 TWT	716	OA22A	2130	MAY.	1975
B1	ARC	11TWT	7 16	IA14A	2084,V-01	FEB ,	1975
В1	ARC	11TWT	716	IA14A	2084,V-02	MARCH,	1975
81	ARC	1 1TWT	716	IA14A	2084,V-03	APRIL,	1975
B1	ARC	1 1TWT	716	IA14A	2084,V-04	APRIL,	1975
В1	ARC	1 1 TWT	716	IA14A	2084,V-05	APRIL.	1975
B1	ARC	11TWT	716	IA14A	2084,V-06	APRIL,	1975
B1	ARC	11TWT	716	IA14A	2084, V-07	APRIL,	1975
В1	ARC	11TWT	716	IA14A	2084, V-0B	APRIL,	1975

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE	
B1	ARC	1 1TWT	716	IA14A	2084, V-09	MAY,	1975	
В1	ARC	1 1 T W T	716	IA14A	2084, V-10	MAY,	1975	
B1	ARC	1 1 TWT	716	IA14A	2084, V-11	MAY,	1975	
ΕJ	ARC	11TWT	747	OA53A	2128,V-01	AUGUST,	1974	
EJ	ARC	11TWT	747	0A53A	2128,V-02	AUGUST,	1974	
NX	ARC	11,97,87UN	074-1	SAIIF	2331,V-01	OCT ,	1981	
NX	ARC	11,97,87UN	074-1	SA11F	2331,V-02	OCT ,	1981	
E7	ARC	11,97,87UN	094	OA 16 IA/B/C	2245,V-01	SEPT ,	1976	
E7	ARC	11,97,87UN	094	0A161A/B/C	2245,V-02	OCT ,	1976	
NQ	ARC	11,97,87UN	144-1	IA135A/B/C	2306,V-01	MAY,	1982	
NQ	ARC	11,97,87UN	144-1	IA135A/B/C	2306,V-02	MAY,	1982	
NQ	ARC	11,97,87UN	144-1	IA135A/B/C	2306, V-03	MAY,	1982	
2Y	ARC	11,97,87UN	289-1	OA126A,B,C	2424,V-01	OCT .	1980	
2Y	ARC	11,97,87UN	289-1	0A126A,B,C	2424,V-02	OCT ,	1980	
зн	ARC	11,97,87UN	289-1	OA126A,B,C	2424,V-03	OCT .	1980	
2\$	ARC	11,97,87UN	705-1	ISTA/B/C	2401	JAN.,	1978	
NG	ARC	12PT	078	OA 159	2265	JAN ,	1976	
NC	ARC	12PT	086	LA65	2246	JULY,	1976	
NJ	ARC	12PT	135-1	LA66	2281	SEPT.,	1976	
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	FACILITY	SUBFACILITY	TEST NO.	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE
15	ARC	12PT	180-1	OA 173	2304	NOV .	1981
20	ARC .	12PT	218-1	OA 101	2405,V-01	SEPT .	1978
20	ARC	12PT	218-1	OA 10 1	2405,V-02	SEPT ,	1978
2Q	ARC	12PT	218-1	QA 101	2405,V-03	SEPT ,	1978
2Q	ARC	12PT	218-1	0A101	2405,V-04	SEPT .	1978
ĮQ.	ARC	12PT	218-1	101AD	2405,V-05	SEPT ,	1978
2Q	ARC	12PT	218-1	0A101	2405,V-06	DCT ,	1978
:9	ARC	14-TWT	080	CA23A	2243	JAN.,	1976
NH	ARC	14-TWT	120	CA23B	2275,V-01	MAY,	1976
۱H	ARC	14-TWT	120	CA23B	2275,V-02	MAY,	1976
ΝZ	ARC	14-TWT	121	CA13	2332	ост,	1977
٧Y	ARC	14-TWT	143-1	IA137	2316	SEPT ,	1976
NL.	ARC	14-TWT	150-1	0A220	2286	OCT ,	1976
зк	ARC	14-TWT	711	IA8	2173	JULY,	1974
				0544	2450	MAY.	1979
34	ARC	22TWT	041,154,11	OS4A		IN PROCE	
2C	ARC	22TWT	167-1	0\$32	2339		1983
3T	ARC	22TWT	382-1	OA252	2473,V-01	JAN .	
3T	ARC	22TWT	382-1 458	0A252 0S300	2473,V-02 2488	JAN . SEPT .	1983

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO.	DMS-DR-	PUBLICAT	ION DATE
AK	ARC	22TWT	467-1	05301	2500	DEC ,	1981
B1	ARC	3 5HWT	147	OA4	2007	MARCH,	1973
BS	ARC	3 5HWT	157	OA 1 1A	2044	OCT ,	1973
ви	ARC	3 5HWT	158	OH2A	2035	APRIL,	1974
вх	ARC	3 5HWT	160	OA 1 1B	2059	JUNE,	1974
ВУ	ARC	3.5HWT	163	0A58	2060	JUNE.	1974
B5	ARC	3.5HWT	167	0 A73	2082	DEC .	1973
B6	ARC	3 5HWT	168	0A23	2071	SEPT ,	1974
37	ARC	3 5HWT	169	IAto	2078	JAN ,	1974
В9	ARC	3 SHWT	171	8H10	2085	JAN ,	1982
88	ARC	3.5HWT	172	IH15	2098	OCT ,	1974
ED	ARC	3.5HWT	173	0H15	2385	SEPT.,	1977
EG	ARC	3.5HWT	175	IA15	2102	APRIL,	1974
EF	ARC	3.5HWT	176	0 A87	2115	MARCH,	1974
EH	ARC	3.5HWT	177	OH44	2386 '	SEPT.,	1977
EI	ARC	3.5HWT	178	1H3	2136,V-01	MAY,	1975
ΕI	ARC	3.5HWT	178	1H3	2136,V-02	MAY,	1975
EI	ARC	3 5HWT	178	IH3	2136,V-03	MAY,	1975
EI	ARC	3.5HWT	178	IH3	2136.V-04	MARCH,	1976
EM	ARC	3 PHMT	180	IA16	2124	MAY,	1974

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE
NĐ	ARC	3 5HWT	182	0Н43	2250	JULY,	1975
EQ	ARC	3 5HWT	183	OH6	2151	NOV.	1975
EN	ARC	3 5HWT	185	IH20	2148,V-01	JUNE,	1975
EN	ARC	3 SHWT	185	IH20	2148,V-02	JUNE,	1975
ĘР	ARC	3 5HWT	187	0V36	2162	NOV ,	1974
EQ	ARC	3.5HWT	190	0A98	2167	AUGUST,	1975
ES	ARC	3 5HWT	191	IA18	2160	MARCH.	1975
EW	ARC	3 5HWT	194	CSAO	2177	MARCH,	1975
EV	ARC	3 5HWT	195	IH28	2180, V-01	SEPT .	1976
EV	ARC	3 5HWT	195	1H28	2180,V-02	SEPT.,	1976
ΕY	ARC	3.5HWT	196	TA9F	2181	NOV ,	1974
EZ	ARC	3 5HWT	198	0H38	2171,V-01	, NAU	1976
ΕZ	ARC	3 5HWT	198	0H38	2171,V-02	JAN.,	1976
EZ	ARC	3.5HWT	198	0H38	2171,V-03	JAN.,	1976
E2	ARC	3 SHWT	199	0H26	2193	OCT.,	1977
E3	ARC	3.5HWT	200	IH27	2210	JUNE,	1979
NB	ARC	3.5HW7	211	IH48	2248	APRIL,	1976
NT	ARC	3 5HWT	215	FH14	2313,V-01	MARCH,	1977
NT	ARC	3.5HWT	215	FH14	2313,V-02	MARCH,	1977
NT	ARC	тина в	215	FH14	2313,V-03	MARCH,	1977
NV	ARC	3 5HWT	216	0H53A	2317	JAN.,	1980

TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ON DATE
2D	ARC	3.5HWT	222	IH68	2357	JUNE,	1983
3Z	ARC	з 5НWТ	227	IH100	2418	OCT ,	1978
20	ARC	3.5HWT	228-1	IH51A	2393	IN PROCES	SS
2P	ARC	3 5HWT	230	IH99	2452	SEPT ,	1982
2V	ARC	3.5HWT	233-1	11173	2407	SEPT ,	1982
2W	ARC	3.5HWT	234-1	1H90	2412,V-01	DEC ,	1982
2W	ARC	3 5HWT	234-1	IH90	2412,V-02	DEC ,	1982
2X	ARC	3 5HWT	235	OH58	2417	JUNE,	1979
AE	ARC	3 5HWT	237	FH16	2423	JAN.,	1980
зс	ARC	3 5HWT	239	IH51B	2429	APRIL,	1982
3F	ARC	, 3.5HWT	241	IH51C	2448,V-01	DCT.,	1980
3F	ARC	3.5HWT	241	1H51C	2448,V-02	OCT .	1980
зи	ARC	3.5HWT	244	IH5 ID	246 f	IN PROCE	ss
3P	ARC	3.5HWT	245	IH103	2467	AUGUST,	1981
ЗR	ARC	3 5HWT	247	OH 105B	2468	JUNE,	1982
зw	ARC	3 5HWT	250	IH104	2480	IN PROCE	ss
AG	ARC	3 SHWT	253	OH110	2495	ост ,	1981
НА	ARC	3.5HWT	254	DH108	2494	JUNE,	1982
NA	ARC	40SWT	462	0A 100	2261,V-01	JULY,	1982
NA	ARC	40SWT	462	DA 100	2261,V-02	JULY,	1982
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATIO	N DATE
NM	ARC	40SWT	473	OA 164	2499	AUGUST,	1981
NO	ARC	40SWT	479	OA 174	2302,V-01	MAY,	1982
NO	ARC	40SWT	479	OA174	2302,V-02	MAY,	1982
2M	ARC	40SWT	500	OA237	2375	DEC ,	1980
EB	ARC	66SWT	630	I A 29	2077,V-01	MAY,	1974
EB	ARC	66SWT	630	IA29	2077,V-02	MAY,	1974
EB	ARC	66SWT	630	OA63	2077,V-03	MAY,	1974
вн	ARC	66SWT	650	OA3	2009	JUNE,	1973
ВТ	ARC	66SWT	706	OA43	2050	NOV ,	1973
ER	ARC	66SWT	709	OA59	2159,V-01	OCT .	1974
ER	ARC	66SWT	709	0A59	2159,V-02	001.,	1974
							-
E5	ARC	87SWT	044	IA82C	2219,V-01	APRIL,	1976
E5	ARC	87SWT	044	IA82C	2219,V-02	APRIL,	1976
2K	ARC	87SWT	115-1	OA149B/C	2370,V-01	APRIL,	1980
2K	ARC	87SWT	115-1	OA149B/C	2370,V-02	APRIL,	1980
2K	ARC	87SWT	115-1	OA149B/C	2370,V-03	MAY,	1980
2H	ARC	87SWT	118-1	0A145C	2389,V-01	JUNE,	1981
2H	ARC .	87SWT	118-1	0A145C	2389,V-02	JUNE,	1981
2H	ARC	87SWT	118-1	OA145C	2389,V-03	JUNE,	1981

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
21	ARC	87SWT	119	OA221B/C	2360,V-01	DEC ,	1980
21	ARC	87SWT	119	0A221B/C	2360,V-02	DEC.,	1980
ЗG	ARC	87SWT	318-1	OA 146	2445,V-01	JUNE,	1983
3G	ARC	87SWT	318-1	OA146	2445,V-02	JUNE,	1983
ВZ	ARC	87SWT	710	IA†2C	2065,V-01	APRIL,	1975
вz	ARC	87SWT	710	IA120	2065,V-02	APRIL.	1975
BZ	ARC	87SWT	710	IA12C	2065,V-03	APRIL.	1975
EL	ARC	87SWT	747	OA53C	2185	SEPT .	1974
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ET	ARC	97SWT	019	IA81B	2194,V-01	NOV ,	1975
ET	ARC	'97SWT	019	IA818	2194,V-02	DEC ,	1975
ET	ARC	97SWT	019	IA81B	2194,V-03	DEC ,	1975
ET	ARC	97SWT	019	IA81B	2194,V-04	DEC.,	1975
ET	ARC	97SWT	019	IA81B	2194,V-05	DEC.,	1975
E6	ARC	97SWT	044	IA82B	2231,V-01	APRIL.	1976
E6	ARC	97SWT	044	IA82B	2231,V-02	APRIL.	1976
E 1	ARC	97SWT	052	IA110	2189	MARCH.	1975
NK	ARC	97SWT	113	IS2A/B	2284.V-01	MAY,	1977
NK	ARC	97SWT	113	IS2A/B	2284.V-02	MAY,	1977
2K	ARC	97SWT	115-1	OA149B/C	2370,V-01	APRIL,	1980
2K	ARC	97SWT	115-1	OA149B/C	2370,V-02	APRIL,	1980
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE
2K	ARC	97SWT	115-1	OA149B/C	2370,V-03	MAY,	1980
G2	ARC	97SWT	118-1	0A145B	2364,V-01	FEB .	1981
G2	ARC	975WT	118-1	OA145B	2364,V-02	MARCH,	1981
G2	ARC	975WT	118-1	OA145B	2364,V-03	FEB ,	1981
21	ARC	975WT	119-1	OA221B/C	2360,V-01	DEC ,	1980
21	ARC	97SWT	119-1	OA221B/C	2360.V-02	DEC .	1980
NN	ARC	975WT	166-1	0513	2287	IN PROCE	ss
2U	ARC	97SWT	242-1	IA105B	2413,V-01	FEB ,	1982
รก	ARC	97SWT	242-1	1A105B	2413,V-02	FEB ,	1982
3D	ARC	97SWT	246-1	IA138	2438,V-01	FEB ,	1982
3D	ARC	97SWT	246-1	1A†38	2438,V-02	FEB ,	1982
3D	ARC	97SWT	246-1	IA138	2438,V-03	FEB.,	1982
21	ARC	97SWT	272	IA156B	2408,V-01	JULY,	1980
2T	ARC	97SWT	272	IA156B	2408,V-02	JULY,	1980
2T	ARC	975WT	272	IA156B	2408,V-03	JULY,	1980
2Z	ARC	97SWT	282-1	0A251B/C	2421,V-01	DEC ,	1980
27	ARC	97SWT	282-1	DA251B/C	2421,V-02	DEC .	1980
ЗE	ARC	97SWT	283-1	IA131B/C	2462,V-01	MARCH,	1983
3E	ARC	975WT	283-1	IA131B/C	2462,V-02	марсн,	1983
зк	ARC	97SWT	347-1	IA184	2456,V-01	SEPT.,	1980
зк	ARC	97SWT	347-1	IA184	2456,V-02	SEPT ,	1980

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		SPACE SHUT	TTLE FACILITY	WIND TUNNEL	SUMMARY		·
TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
3M	ARC	97SWT	369-1	0837	2459	IN PROCES	S
AJ	ARC	97SWT	464	OS55	2465	IN PROCES	
AQ	ARC	97SWT	501-1	0S304B	2502	AUGUST,	1982
AO	ARC	97SWT	503-1	0S302B	2504	SEPT.,	1982
BJ	ARC	97SWT	616	IA2	2013	FEB ,	1974
BV	ARC	97SWT	710	IA12B	2048	JULY,	1974
В4	ARC	97SWT	716	OA22B	2131	MAY,	1975
В3	ARC	97SWT	716	IA14B	2129,V-O1	MAY,	1975
B3	ARC	97SWT	716	IA14B	2129,V-02	MAY,	1975
EK	ARC	97SWT	747	OA53B	2178	AUGUST,	1974
•	• • • • • • •			• • • • •		•	
UQ	CALSPAN	LT	195-100	IH75	2453	JUNE,	1979
UG	CALSPAN	48HST	173-100	0H12	2164,V-02	JAN ,	1976
UL	CALSPAN	48HST	181	IH5	2308	OCT .	1976
UI	CALSPAN	48HST	184-120	DA93	2238	NOV ,	1976
UH	CALSPAN	48HST	184-220	OA 113	2234	JULY,	1975
บป	CALSPAN	48HST	185-131	IH33	2249	JUNE,	1979
UM	CALSPAN	48HST	189	IH43	2319	JUNE,	1979
UG	CALSPAN	48HST	173-100	0H12	2164,V-01	JAN ,	1976
UG	CALSPAN	48HST	173-100	0H12	2164,V-03	DEC ,	1975

OF POOR	ORIGINAL
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATION	ON DATE
UF	CALSPAN	8TWT	T14-053	1436	2064, V-01	DEC.,	1975
UF	CALSPAN	8TWT	T14-053	IA36	2064, V-O2	DEC ,	1975
UK	CALSPAN	втwт	T18-103	LA70	2269	SEPT ,	1976
UN	CALSPAN	BTWT	T18-111	LAB2	2374	OCT .	1982
VO	CALSPAN	96HST	131	OH66	2359	MARCH,	1978
		•				•	
GN	JSC		56-A-76	OH78	2371	MAY,	1978
5A	JSC		61-A-78	0H79	2443	JUNE,	1979
•						•	•
PX	LARC	CFHT	100	LA25	2126	CANCELLED	
QI	LARC	CFHT	101	0A85	2113	OCT .	1974
QU	LARC	CFHT	102	LA35	2127	JULY,	1974
HH	LARC	CFHT	104	LA47	2191	JULY,	1975
QQ	LARC	CFHT	105	LA34	2328	AUGUST,	1976
QK	LARC	CFHT	107	1A58	2133	JULY,	1974
H1	LARC	CFHT	108	IA60	2137, V-01, R-01	SEPT ,	1974
H2	LARC	CFHT	109	OA105	2137,V-02	JULY,	1974
υQ	LARC	CFHT	110	0A90	2149	AUGUST,	1975
HD	LARC	CFHT	112	OH5 1	2368	APRIL,	1977
HL	LARC	CFHT	113	OA82	2195	FEB ,	1975

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		SPACE SHUT	TLE FACILIT	Y WIND TUNNEL	SUMMARY		
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TEST	FACILITY			NASA SERIES NO.			
нх	LARC	CFHT	114	LA57	2454,V-03	APRIL.	1979
JA	LARC	CFHT	118	MA22	2267, V-01	JUNE,	1976
Ab	LARC	CFHT	118	MA22	2267,V-02	JUNE,	1976
JA	LARC	CFHT	118	MA22	2267,V-03	JUNE,	1976
JA	LARC	СЕНТ	118	MA22	2267, V-04	JUNE,	1976
К2	LARC	СЕНТ	130	LA93	2,383	IN PROCE	ss
oz	LARC	CFHT	85	LA3	2031	JUNE,	1973
от	LARC	CFHT	89	MA4	2008	JAN ,	1973
OT	LARC	CFHT	89	MA4	2008,R-01	MAY,	1973
PD	LARC	CFHT	96	LA11	2066	NOV.,	1973
QO	LARC	CFHT	97 .	LA32	2168	MAY,	1974
QN	LARC	CFHT	98	LA31	2047	FEB ,	1974
PF	LARC	CFHT	99	LA13	2135	CANCELLE	D
QS	LARC	CF4	121-137	0H45	2109	JAN.,	1976
НО	LARC	CF4	220-237	LA53	2213	IN PROCE	ss
J5	LARC	CF4	267-268	LA78	2311	AUGUST,	1976
QM	LARC	CF4	97-118	IH18	2110	JAN.,	1976
QE	LARC	HNT	28	IH19	2157	DEC ,	1975
QD	LARC	HNT	30-31	0A89	2214	APRIL,	1975
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
HW	LARC	LARC	699	LA56	2224	MARCH,	
P <b>7</b>	LARC	LTPT	130/135	LA9	2056	NOV ,	1973
PP	LARC	LTPT	138	OA 17	2058	MARCH,	1974
PU	LARC	LTPT	141	LA23	2070	ост ,	1973
JS	LARC	LTPT	214	LA36B	2292	IN PROCES	s
J2	LARC	LTPT	219	LA61	2278	CANCELLED	ļ
JE	LARC	LTPT	227	LA73A	2298	MAY,	1978
ď٢	LARC	LTPT	228	LA61B	2300	OCT ,	1976
JP	LARC	LTPT	229	LA81	2296,V-01	AUGUST,	1976
JP	LARC	LTPT	229	LA81	2296,V-02	AUGUST,	1976
KA	LARC	LTPT	246	LA104	2387	CANCELLED	i
кu	LARC	LTPT	255	LA12/	2441	IN PROCES	5
HR	LARC	TDT	246	<b>0</b> \$7	2363	APRIL,	1977
HR	LARC	TOT	246	056	2365	APRIL,	1977
0Q	LARC	UPWT	1002	MA5	2001	NOV.,	1972
οv	LARC	UPWT	1007	OA7	2014	MARCH,	1973
P8	LARC	UPWT	1015	LA 10	2052	NOV ,	1973
P6	LARC	UPWT	1023/1034	LABA	2054 .	NOV ,	1973
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TEST	FACILITY	CUREAGILITY	TEST NO	NASA		5151 7617	
	PACILITY	SUBFACILITY	TEST NO.	SERIES NO	DMS-DR-	PUBLICATI	LON DATE
PM	LARC	UP₩T	1031	MA7	2069	JAN ,	1974
PN	LARC	UPWT	1035	0A44	2057	NOV ,	1974
P6	LARC	UPWT	1040	LABC	2090	MARCH,	1974
PQ	LARC	UPWT	1041	IH16	2166	JULY,	1975
PV	LARC	UPWT	1043	0A70	2073	MARCH,	1974
PG	LARC -	UPWT	1046/1049	LA 14A	2106	JAN ,	1975
96	LARC	UPWT	1056/1073	1A42A	2119	AUGUST,	1974
Q2	LARC	UPWT	1057	0A20A	2083	FEB.,	1974
Q2	LARC	UPWT	1057	DA20C	2147	MAY,	1974
Q3	LARC	UPWT	1059	IH4	2138,V-O1	MAY,	1976
Ø3	LARC	UPWT	1059 '	IH4	2138,V-02	JULY,	1976
03	LARC	UPWT	1059	IH4	2138, V-03	JULY,	1976
Q3	LARC	UPWT	1059	IH4	2138,V-04	JULY,	1976
Q4	LARC	UPWT	1063	IA35	2108	MAY,	1974
Q7	LARC	UPWT	1071	IH1	2153	ост ,	1977
H5	LARC	UPWT	1074	LA43A/B	2199	OCT ,	1976
QY	LARC	UPWT	1075	LA39	2188	IN PROCES	SS
Н9	LARC	UPWT	1087	SA25F	2150	MARCH,	1975
H8	LARC	TW9U	1088/1119	1A44	2206	MAY,	1975
HG	LARC	UPWT	1092//1117	LA46A/B	2228	IN PROCES	ss
Q2	LARC	UPWT	1097	CA2OB	2163	SEPT.,	1974

OF POOR	ORIGINAL
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EST ODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ON DATE
IJ	LARC	UPWT	1101	LA49	2182	APRIL,	1977
IΑ	LARC	UPWT	1115	SH12F	2216	AUGUST,	1975
14	LARC	UPWT	1118	LA63A	2270	DEC ,	1975
IB	LARC	TWqU	1145	LA45A/B	2297	, VON	1976
ic	LARC	UPWT	1147 /1132	LA71A/B	2271	FEB ,	1977
14	LARC	UPWT	1151	LA63B	2279	JUNE,	1976
ıĸ	LARC	UPWT	1152	IA94A	2323	FEB ,	1977
JН	LARC	UPWT	1173	LA75	2318,V-01	DEC .	1976
IН	LARC	UPWT	1173	LA75	2318,V-02	DEC.,	1976
ıw	LARC	UPWT	1177	IA94B	2324	FEB ,	1977
(D	LARC	UPWT	1194	LA101	2390	JUNE,	1980
(R	LARC	UPWT	1207 LG2	LA 124	2426	JUNE,	1978
(I	LARC	UPWT	1212	LA110	2396	DEC ,	1977
ĸΚ	LARC	UPWT	1217	LA114	2399	NOV ,	1977
<b>KS</b>	LARC	UPWT	1243	LA 125	2432	OCT ,	1981
۲V	LARC	UPWT	1267	IA180	2457	MARCH,	1981
¢Χ	LARC	TWQU	1270	LA122	2446	IN PROCES	SS
7A	LARC	UPWT	1299	LA131	2478,V-01	AUGUST,	1980
7A	LARC	UPWT	1299	LA131	2478,V-O2	AUGUST.	1980
7A	LARC	UPWT	1299	LA131	2478, V-03	AUGUST,	1980
7B	LARC	UPWT	1311	DA255	2498	IN PROCES	ss

PAGE	OF POOR	ORIGINAL
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		SPACE SHUT	TTLE FACILITY	WIND TUNNEL	SUMMARY		
TEST	FACILITY	SUBFACILITY		NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE
7H	LARC	UPWT	1345 /1390	LA 145	2336	MAY,	1983
P1	LARC	UPWT	995 /1014	LA4	2033	JULY,	1973
J7	LARC	V/STOL	114	OA 155 °	2237	IN PROCE	ss
JF	LARC	V/STOL	129	CA8	2290,V-01	NOV ,	1976
JF	LARC	V/STOL	129	CA8	2290,V-02	NOV ,	1976
₫F	LAPC	V/STOL	129	CA8	2290,V-03	NOV ,	1976
ปน	LARC	16TT	312	DA224	2329	AUGUST,	1981
KP	LARC	1677	325	0A270B/C	2419	SEPT.,	1978
KN	LARC	16TT	326 '	<b>0A270A</b>	2430.V-01	MARCH,	198†
KN	LARC	16TT	326	0A270A	2430,V-02	MARCH,	1981
KN	LARC	1677	326	DA270A	2430,V-03	MARCH,	1981
KW	LARC	16TT	341	LA132	2471	, NAL	1981
KY	LARC	16TT	342	LA 140	2475	AUGUST,	1980
PH	LARC	20HT6	441	LA15	2079	APRIL,	1974
HN	LARC	20HT6	458	LA52	2220	IN PROCES	ss
ΚZ	LARC	20HT6	6546	LA141A/B	2477	JUNE,	1981
7E	LARC	20HT6	6559	OA257	2466,V-01	IN PROCES	SS
7E	LARC	20HT6	6559	OA257	2466,V-02	IN PROCES	SS

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		SPACE SHUT	TLE FACILIT	Y WIND TUNNEL	SUMMARY		
TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT)	ION DATE
ON	LARC	22HT	405	LA22	2034	JULY,	1973
os	LARC	22HT	409	MA2	2003	APRIL,	1973
γo	LARC	22HT	411	LA2	2023	JUNE.	1973
P2	LARC	22HT	413	LA5	2036	AUGUST,	1973
PT	LARC	22HT	415	OA72	2092	NOV ,	1974
QC	LARC	22HT	422	88AU	2125	SEPT ,	1974
нз	LARC	22HT	426	LA40	2176	MAY,	1978
HE	LARC	22HT	431	0A 109	2205	MAY,	1975
J8	LARC	22HT	439	LA68	2256	IN PROCES	SS
JY	LARC	22HT	445	LA85	2343	DEC.,	
PΖ	LARC	26ТВТ		OS2	2067	AUGUST,	
QT	LARC	26TBT	545	OS 1	2094	MARCH,	1974
HF	LARC	26TBT		154		APRIL,	
H <b>7</b>	LARC	60VS	R3289	0899	2172	ост ,	1974
ЛN	LARC	710HST	999	LABO		JUNE,	1977
au	LARC	8ТРТ		LAT		MARCH,	
P4	LARC	87PT	643	LA6	2040	AUGUST,	1973
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
P5	LARC	8178	644	LA7A	2041	ост,	1973
PC	LARC	8TPT	648	LA17	2046	AUGUST,	1973
PS	LARC	8TPT	655	SA2FA	2088	JULY,	1974
P5	LARC	8TPT	657/660	LA7B	2091	MARCH,	1975
Q1	LARC	8ТРТ	661	DA25	2089	APRIL,	1974
80	LARC	8797	667	1441	2118	AUGUST.	1974
QZ	LARC	8TPT	668	OA 106	2120	JAN ,	1975
QX	LARC	8ТРТ	669	LA38A	2121	CANCELLED	)
QX	LARC	8727	676	LA38B	2239	IN PROCES	ss
H6	LARC	8TPT	677	LA44	2200	OCT ,	1976
ні	LARC	BTPT	680 '	LA48	2184	APRIL.	1977
ни	LARC	втрт	684	LA51	2183	FEB ,	1977
HU	LARC	8ТРТ	686	OA116	2186	JAN ,	1975
НМ	LARC	втрт	687	DA 102	2229	FEB ,	1975
НС	LARC	втрт	693 ,	1A43	2204	MAY,	1975
HZ	LARC	тчтв	703	LA59	2233	JUNE,	1977
J1	LARC	8ТРТ	704	LA60A	2259	CANCELLE	)
J9	LARC	8TPT	714	LA69	2257	SEPT.,	1977
КВ	LARC	8ТРТ	715	LA60B	2260	IN PROCES	ss
J3	LARC	8TPT	717	LA62	2264	DEC ,	1975
JD	LARC	TOTE ,	740	LA72	2309	, von	1976
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TEST CODE	FACILITY	SUBFACILITY		NASA SERIES NO	DMS-DR-	PUBLICATI	ON DATE
ปูป	LARC	8TPT	749	1 493	2326,V-01	JAN ,	1977
JJ	LARC	8TPT	749	1 493	2326,V-O2	FEB ,	1977
J6	LARC	8ТРТ	758	LA91	2352	JAN .	1978
K1	LARC	8ТРТ	764	LA92	2362	IN PROCES	s
К9	LARC	8ТРТ	769	LA99	2373	MARCH,	1981
кс	LARC	8TPT	776	LA106	2379	IN PROCES	s
KE	LARC	8ТРТ	779	IA244	2391	MARCH,	1982
KF	LARC	8TPT	780	LA107	2381	JUNE,	1983
кн	LARC	8TPT	780	LA113	2397	APRIL.	1982
КJ	LARC	7978	786	LA111	2395	JAN ,	1978
KL	LARC	8TPT	803	LA115	2409	SEPT.,	1981
KM	LARC	втрт	804	LA116	2411	IN PROCES	S
KQ	LARC	8ТРТ	813	LA117	2425	IN PROCES	S
7C	LARC	8ТРТ	905,6,7,9	OS53A	2503	JULY,	1982
οх	LARC	8VDHT	3619/3670	DH40	2049	JULY,	1973
Р3	LARC	8VDHT	3778//3855	OH4 1	2075	OCT ,	1973
P9	LARC	8VDHT	4060//4079	0H4 1A	2076	OCT ,	1973
PA	LARC	8VDHT	4080/4105	OH42A	2101	JAN ,	1974
QR	LARC	8VDHT	4502-4601	0H46	2350	APRIL,	1977
РВ	LARC	THOVB	624	LA16	2043	JUNE,	1973
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE
PO	LARC	8VDHT	644	0H13	2096	AUGUST,	1974
PR	LARC	8VDHT	646/647	IH17	2105	SEPT ,	1976
QL	LARC	8VDHT	648	OH14	2117	SEPT.,	1976
PK	LARC	8VDHT	653	LA20	2107	MARCH.	1975
• •	• •						
GG	LERC	SPF		OH64	2288	NOV .	1977
GE	LERC	10SWT	035	SAGF	2161	FEB .	1975
GF	LERC	10SWT	038	IH34	2282	APRIL,	1978
GK	LERC	10SWT	041	IH39	2435	ост.,	1978
GY	LERC	10SWT	042 .	OA234	2400	ост ,	1980
GZ	LERC	10SWT	044	IH83	2440	FEB ,	1979
GI	LERC	10SWT	045	IH11	2428,V-01	FEB.,	1981
GI	LERC	10SWT	045	IH11	2428,V-02	FEB ,	1981
GI	LERC	10SWT	045	IH11	2428,V-03	FEB ,	1981
GI	LERC	10SWT	045	IH11	2428,V-04	FEB.,	1981
DE	LTV	HSWT	458	IA4	2015,V-01	JULY,	1973
ĐE	LTV	HSWT	458	IA4	2015,V-02	JULY,	1973
FO	LTV	HSWT	488	OA84	2037	SEPT ,	1974
QB	LTV	HSWT	498	LA28	2280	JAN ,	1976

		SPACE SHUT	TLE FACILITY	WIND TUNNEL	SUMMARY		
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TEST CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATI	ON DATE
	LTV	HSWT	512	LA58	2215	FEB.,	1976
HY FD	LTV	HSWT	552	LA67	2266	JULY,	1976
FE	LTV	HSWT	559	CA26	2273,V-01	MAY,	1976
FE FE	LTV	HSWT	559	CA26	2273,V-02	JUNE,	1975
FE	LTV	HSWT	559	CA26	2273.V-03	JUNE.	1976
FE	LTV	HSWT	559	CA26	2273,V-04	JUNE.	1976
FE	LTV	HSWT	559	CA26	2273,V-05	JUNE,	1976
FI	LTV	HSWT	573	LA76	2305, V-01	JUNE,	1977
FI	LTV	HSWT	573	LA76	2305,V-02	JUNE.	1977
FR	LTV	HSWT	611	LA 109	2394	IN PROCES	ss
KY	LTV	HSWT	646	LA 128	2442	IN PROCES	ss
FS	LTV	HSWT	742	LA 144	2484	IN PROCES	ss
FG	LTV	LSWT		MA 14	2283	NOV ,	
DD	LTV	1520SWT	S-081	MA 1	2004	NOV ,	
• •	• •	• •			• •	•	
1E	MSFC	HRWT	033	SA29F	2207	JULY,	1976
1F	MSFC	HRWT	034	SA 13F	2277	JULY,	1976
1T	MSFC	HRWT	039	SA31F	2369	FEB ,	1982

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TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO.	DMS-DR-	PUBLICAT	ION DATE
1U	MSFC	IPBF	027	0Н8	2382 <	NOV ,	1977
6C	MSFC	TWT	668	IA603	2416	JUNE,	1981
72	MSFC	14TWT	545	IA1B	2010	MAY,	1973
79	MSFC	14TWT	554	SA1F	2012	APRIL,	1973
76	MSFC	14TWT	555	OA1	2005	NOV.,	1972
77	MSFC	14TWT	556	IA1A	2006	DEC ,	1972
78	MSFC	14TWT	558	MA9F	2011	APRIL,	1973
80	MSFC	14TWT	565	SAGF	2025	MAY,	1973
3 1	MSFC	14TWT	566 •	IA31F	2026	SEPT .	1973
32	MSFC	14TWT	567	IA32FB	2027,V-01	SEPT ,	1975
32	MSFC	14TWT	567	IA32FB	2027,V-02	ост ,	1975
32	MSFC	14TWT	567	IA32FB	2027,V-03	OCT.,	1975
84	MSFC	14TWT	568	0A47	2029	MAY,	1973
33	MSFC	14TWT	570	IA31FB	2028,V-01	DEC ,	1974
33	MSFC	14TWT	570	IA31FB	2028,V-02	DEC .	1974
35	MSFC	14TWT	571	IAGA	2039	MARCH,	1974
36	MSFC	14TWT	572	SA5F	2051	AUGUST,	1973
90	MSFC	14TWT	573	IA31FC	2072	JAN .	1974
37	MSFC	14TWT	574	OA48	2055, V-01	SEPT.,	1973

OF POOR	ORIGINAL
2 2 7	Page 18

TEST CODE	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO	DMS-DR-	PUBLICAT	ION DATE
87	MSFC	14TWT	574	0A48	2055,V-02	SEPT ,	1973
87	MSFC	14TWT	574	0A48	2055,V-03	NOV ,	1973
91	MSFC	14T₩T	578	SATOF	2087	SEPT ,	1974
88	MSFC	14TWT	579/580	IA37	2063	NOV ,	1973
92	MSFC	14TWT	581	0A49	2095	SEPT ,	1974
1B	MSFC	14TWT	582	IS6A	2158	OCT ,	1976
99	MSFC	14TWT	583	TA1F	2145	OCT .	1974
98	MSFC	14TWT	584	1A52	2042	MARCH.	1974
93	MSFC	14TWT	585	IA37B	2093	MARCH,	1974
97	MSFC	14TWT	587	FA4	2,142	AUGUST,	1974
96	MSFC	14TWT	588	I A53	2123	, NAU	1975
94	MSFC	14TWT	589	1 A 6 2 F	2103	APRIL,	1974
95	MSFC	14TWT	590/595	SA26F	2111	NOV ,	1974
1C	MSFC	14TWT	594	IV33	2174, V-01	NOV .	1975
10	MSFC	14TWT	594	EEAI	2174,V-02	NOV ,	1975
1C	MSFC	14TWT	594	EEAI	2174,V-03	NOV .	1975
1A	MSFC	14TWT	596	TA2F	2165, V-01	DEC ,	1975
1A	MSFC	14TWT	596	TA2F	2165,V-02	DEC ,	1975
1A	MSFC	14TWT	596	TA2F	2165,V-03	DEC ,	1975
1A	MSFC	14TWT	596	TA2F	2165,V-04	JAN ,	1976
1A	MSFC	14TWT	596	TA2F	2165,V-05	DEC ,	1975

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CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATI	ON DATE
1D	MSFC	14TWT	599	0A 108	2190	JUNE,	1975
1L	MSFC	14TWT	600	FA14	2274	FEB.,	1976
11	MSFC	14TWT	603	SA28F	2244	AUGUST,	1977
1H	MSFC	14TWT	604	SABF	2223	JULY,	1975
1M	MSFC	14TWT	607	0A131	2232	JUNE,	1975
1G	MSFC	14TWT	609	TA3F	2208,V-01	JAN ,	1976
1G	MSFC	14TWT	609	TASF	2208.V-02	JAN ,	1976
1K	MSFC	14TWT	610	IA71	2227	NOV ,	1975
1ป	MSFC	14TWT	611	SA3OF	2235	NOV ,	1975
10	MSFC	14TWT	620	SA14FA	2325	NOV,	1976
tN	MSFC	14TWT	622 .	IA125	2253	, NAL	1976
IP	MSFC	14TWT	640	SA14FB	2310,V-01	AUGUST,	1977
IP	MSFC	14TWT	640	SA14FB	2310,V-02	AUGUST,	1977
1Q	MSFC	14TWT	641 /646	IA140A/B	2335	DEC ,	1979
1R	MSFC	14TWT	645	SA21F	2345	OCT.,	1978
10	MSFC	14TWT	649	IA181	2406	JULY,	1982
1X	MSFC	14TWT	652	FA25	2437	FEB ,	1979
1Y	MSFC	14TWT	655	FA27	2460	IN PROCES	S
12	MSFC	14TWT	656	FA28	2474	JULY,	1981
6B	MSFC	14TWT	665	IA602	2481	JUNE,	1983

OF POOR	ORIGINAL
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TEST				NASA			
CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATI	ON DATE
DF	NRLAD	LSWT	689	DA2	2016	APRIL,	1973
DG	NRLAD	LSWT	690	OA5	2017	APRIL,	1973
на	NRLAD	LSWT	693	143	2018	JUNE,	1973
DI	NRLAD	LSWT	694	OA6	2019	JUNE,	1973
ρJ	NRLAD	LSWT	696	049	2020	JUNE,	1973
DK	NRLAD	LSWT	698	OA 10 '	2022	JUNE,	1973
DL	NRLAD	LSWT	699	OA45	2021,V-01	NOV ,	1973
DL	NRLAD	LSWT	699	OA45	2021,V-02	ост ,	1973
DM	NRLAD	LSWT	700	DA 14	2030	AUGUST,	1973
DN	NRLAD	LSWT	701	OA 16	2038	FEB ,	1974
DO	NRLAD	LSWT	704	OA 18	2045	SEPT ,	1973
DP	NRLAD	LSWT	705	OA21B	2053,V-01	DEC ,	1973
DP	NRLAD	LSWT	705	0A21B	2053,V-02	FEB .	1974
DS	NRLAD	LSWT	708	OA71A	2068	DEC ,	1973
DT	NRLAD	LSWT	709	OA57A	2074	σςτ.,	1974
DQ	NRLAD	LSWT	711	OA69	2081,V-01	JAN ,	1976
DQ	NRLAD	LSWT	711	0469	2081,V-02	JAN ,	1976
DU	NRLAD	LSWT	712	OA71C	2086	FEB ,	1974
DV	NRLAD	LSWT	713	OA57B	2080,V-01	ост ,	1974
DV	NRLAD	LSWT	713	0A57B	2080,V-02	ост ,	1974
DW	NRLAD	LSWT	715	OA62A	2097	JUNE,	1974

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CODE	FACILITY	SUBFACILITY	TEST NO	SERIES NO	DMS-DR-	PUBLICATION	ON DATE
DX	NRLAD	LSWT	716	0A86	2114	JUNE,	1974
DZ	NRLAD	LSWT	717	OA62B	2104,V-01	JULY,	1974
DX	NRLAD	LSWT	717	OA62B	2104,V-02	AUGUST,	1974
F2	NRLAD	LSWT	719	0A37	2140	SEPT.,	1974
F5	NRLAÐ	LSWT	721	DA 1 10	2155	SEPT .	1974
F6	NRLAD	LSWT	724	OA118	2139	OCT ,	1974
F8	NRLAD	LSWT	726	OA 1 19A	2187	NOV ,	1974
F9	NRLAD	LSWT	730	OA 1 19B	2203	APRIL,	1975
FA	NRLAD	LSWT	731	OA 123	2202	APRIL.	1975
FB	NRLAD '	LSWT	736	OA 124	2209	JUNE,	1975
FC	NRLAD	LSWT	737	DA 143	2221	JULY,	1975
FF	NRLAD	LSWT	751	DA 163	2289,V-O1	DEC .	1976
FF	NRLAD	LSWT	751	OA 163	2289,V-02	DEC .	1976
FF	NRLAD	LSWT	751	OA 163	2289,V-03	DEC .	1976
FF	NRLAD	LSWT	751	OA 163	2289,V-04	DEC ,	1976
FG ,	NRLAD	LSWT	752	OA 172	2294,V-01	JUNE,	1981
FG	NRLAD	LSWT	752	OA 172	2294,V-02	JUNE,	1981
FJ	NRLAD	LSWT	754	OA176	2314	FEB ,	1981
FŁ	NRI AD	LSWT	757	OA228	2322	NOV ,	1981
FM	NRLAD	LSWT	759	OA236	2337	DEC .	1979
FN	NRLAD	LSWT	764	OA238	2351	JAN ,	1982

TEST	FACILITY	SUBFACILITY	TEST NO	NASA SERIES NO.	DMS-DR-	PUBLICAT	ION DATE
FO	NRLAD	LSWT	766	OA223	2402	NOV .	1978
FP	NRLAD	LSWT	768	OA 163B	2361,V-01	ост ,	1977
FP	NRLAD	LSWT	768	OA 163B	2361,V-02	ост,	1977
FQ	NRLAD	LSWT	775	OA250	2392	DEC ,	1977
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DR	NRLAD	7TWT	276	0A68 '	2061	DEC ,	1973
DY	NRLAD	7TWT	278 *	OA91	2116	APRIL,	1974
F3	NRLAD	7 FWT	280	IA69	2122	DEC .	1974
F4	NRLAD	7 <b>7</b> ₩ <b>T</b>	281	1A68	2144	NOV.,	1974
F7	NRLAD	7TWT	282	1A70	2175,V-01	DEC ,	1974
F7	NRLAD	7TWT	282	IA70	2175,V-02	DEC ,	1974
F7	NRLAD	717	282	IA70	2175,V-03	DEC ,	1974
FK	NRLAD	7TWT	297	IA141	2315	AUGUST,	1976
			٠	••		•	
GJ	NSWC		1310	OA 171	2433	ост ,	1978
JM	NSWC	88	1275	LA79	2291	IN PROCESS	
	•			•			
GM	TBCA	BTWT	1431	CA5	2211,V-01	SEPT ,	1975
GN	TBCA	BTWT	1431	CA2O	2217,V-01	JAN ,	1976
GM	TBCA	BTWT	1431	CA5	2211,V-02	SEPT ,	1975
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SPACE SHUTTLE FACILITY WIND TUNNEL SUMMARY							
	4					**	***
TEST							
CODE	FACILITY	SUBFACILITY	TEST NO.	NASA SERIES NO	DMS-DR-	PUBLICAT	ON DATE
GN	TBCA	BTWT	1431	CA20	2217,V-02	JAN ,	1976
GM	TBCA	BTWT	1431	CA5	2211,V-03	SEPT.,	1975
GN	TBCA	BTWT	1431	CA20	2217,V-03	JAN ,	1976
GP	TBCA	BTWT	1472	CA6	2262,V-01	NOV ,	1976
GP	TBCA	BTWT	1472	CA6	2262,V-02	NOV ,	1976
GQ	TBCA	BTWT	1477	CA9	2268,V-01	JUNE,	1979
GQ	TBCA	BTWT	1477	CA9	2268,V-02	JUNE,	1979
GQ	TBCA	BTWT	1477	CA9	2268,V-03	JUNE,	1979
GQ	TBCA	BTWT	1477	CA9	2268,V-04	JUNE,	1979
GQ	TBCA	BTWT	1477	CA9	2268,V-05	JUNE,	1979
GV	TBCA	BTWT	1490/1493	CS4/5	2341	act.,	1976
GR	TBCA	BTWT	1496 /1497	CA14A	2307,V-01	SEPT.,	1981
GR	TBCA	BTWT	1496 /1497	CA14A	2307,V-02	SEPT ,	1981
GL	UW	LSWT	1136	CA3	2201	DEC.,	1981
GO	UW	LSWT	1146	CA11	2236	DEC ,	1975
GU	UW	LSWT	1170	c23	2338	NOV,	1976
GS	UW	LSWT	1173	CA 15A	2347.V-01	JUNE,	1980
GT	UW	LSWŤ	1178	CA 158	2348,V-O1	JUNE,	1980
GW	UW	LSWT	1184	CA 17	2349	NOV ,	1977

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